

The Impact of Collective Bargaining on Differences in the Position of Manual and Non-Manual Workers in the Czech Labour Market

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Introduction

Manual and non-manual workers are specific groups in the labour market. Different demands are placed on each of these groups in terms of qualification requirements and in terms of physical or mental demands of work. **Changes in the labour market** related to the 4th Industrial Revolution are reflected differently in manual workers and differently in non-manual workers. The results of collective bargaining may also have a **different effect** on these groups of employees in this context.

Social dialogue is currently facing the challenges brought by changes in labour markets and the **importance of the existence of trade unions** is growing, which clearly contribute to improving the working conditions of employees and mitigate the effects of changes in the labour market on vulnerable groups.

The aim of the study is to evaluate the **impact of collective bargaining** on the position of **manual and non-manual workers** in the Czech labour market. The study will also place this issue in an international context.

The structure of the study will be as follows:

The first chapter will describe the differences in the position of manual and non-manual workers in the labour market in the Czech Republic in terms of their socio-economic characteristics, characteristics of employers, differences in working hours or remuneration.

The second chapter will address the differences in threats in the labour market in an international context. The impact of current trends in the labour market on the working conditions of individual groups of employees or industries will be examined. The chapter will focus mainly on the differences in hours worked, earnings and demand for skills, which affect the position of manual and non-manual workers in labour markets. Furthermore, the impact of trade union involvement on employees' working conditions and the effects of the coronavirus crisis on employment in an international comparison will also be characterized.

The third chapter will focus on examining the impact of collective bargaining on the working conditions of manual and non-manual workers in the Czech Republic. Attention will be paid to differences in hours worked, leave, overtime and differences in earnings of manual and non-manual workers. These indicators will be compared between workers in whose company there is a collective agreement and employees without the protection of a collective agreement to identify the impact of collective bargaining on the monitored groups of employees. All these indicators will also be analysed according to the different characteristics of manual and non-manual workers (e.g. by gender, education or size of employer).

To conclude, the main findings of the study will be summarized.

1 Manual and non-manual workers in the Czech labour market

Current trends in labour markets not only in the Czech Republic cause changes in the nature of work of many employees. Recently, attention has been paid mainly to changes related to **digitalization, robotics and automation**. These trends affect different groups of employees differently and can thus deepen the polarization of work. **Large differences** in the nature of work can be clearly observed between **manual and non-manual workers**. These are, by their nature, different types of jobs (different forms of work, qualification requirements, physical or mental demands, etc.). The different nature of manual and non-manual jobs is reflected in the different structure of working hours and remuneration. Each of these groups of employees faces different problems which stem from the aforementioned different nature of their work.

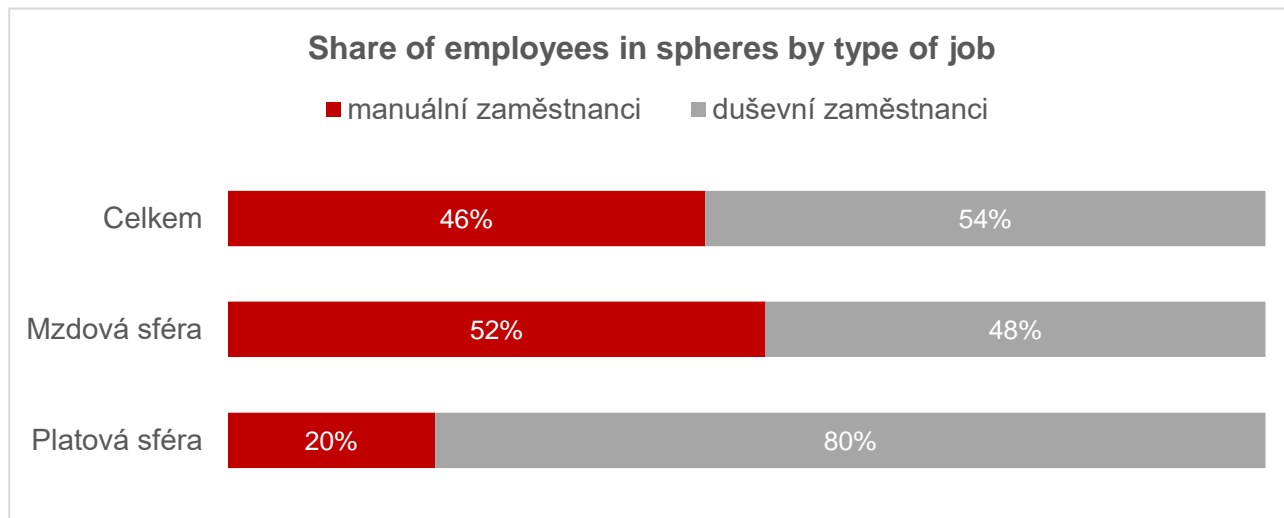
To identify the main problems resonating between the groups of employees, it is necessary to consider the differences and position of manual and non-manual workers in the labour market. For these reasons, the first chapter deals with the **comparison of the characteristics** of manual and non-manual workers and their position in the labour market in terms of their structure, hours worked or remuneration.

1.1 Employee characteristics

The distribution of manual and non-manual workers in the Czech labour market is summarized in Figure 1. Overall, we observe slightly **more non-manual workers** (54%) than manual workers (46%). However, the distribution in terms of the sphere is significantly different. While only slightly **more manual** (52%) than non-manual (48%) workers work in the **wage sphere**, 80% are employees with a **non-manual** nature of work in the **salary sphere**.

The following figures show a more detailed structure of manual and non-manual workers by gender, age, education, citizenship or occupation.

Figure 1: Share of manual and non-manual workers in the wage and salary spheres in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

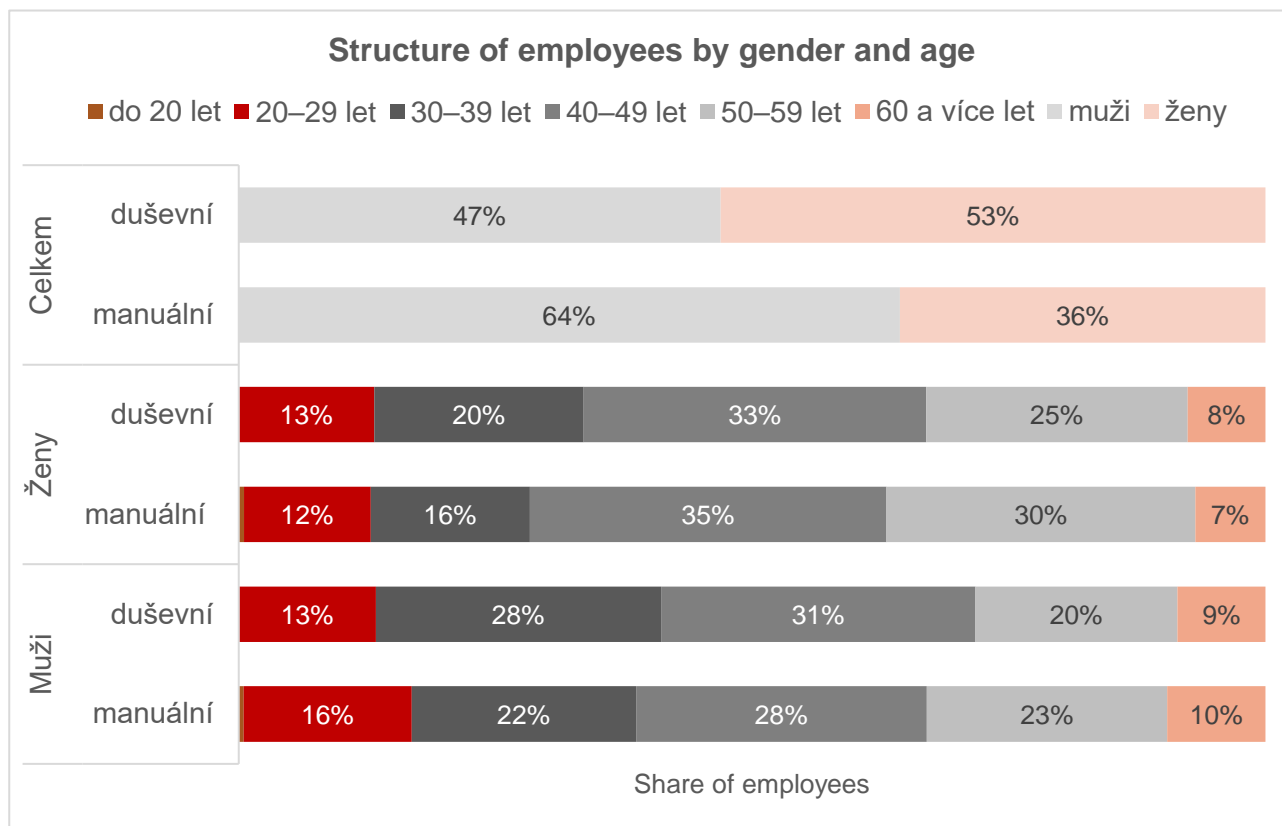
	manual workers	non-manual workers
Total		
Wage sphere		
Salary sphere		

Figure 2 shows that there are **more men** (64%) than women (38%) in **manual jobs** and slightly **more women** (53%) than men (47%) work in **non-manual** jobs.

In terms of the age structure of women, we observe that the most represented age group is 40–49 years in manual and non-manual jobs (33% of non-manual and 35% of manual workers). The least represented age group is generally the age group under 20 years (under 1% for manual and non-manual) and the age group of 60 years and over (8% of non-manual and 7% of manual workers). Differences in structure can be noted especially in the age **group of 50–59 years**. A **quarter of female workers** belong to this age group in **non-manual** workers, while **30%** of female workers are in this age group in **manual** workers. We observe a higher proportion of non-manual workers compared to manual workers in the age group of 30–39 years (20% non-manual and 16% manual).

The most common age group is 40–49 years in men (31% of non-manual and 28% of manual workers). Men are also least represented in the age group under 20 years (under 1% for manual and non-manual) and in the age group over 60 years (9% manual and 10% non-manual). The biggest difference in the structure of manual and non-manual workers in men is in the age group of **30–39 years**, where **28% of manual** and **22% of non-manual** workers work.

Figure 2: Structure of manual and non-manual workers by gender and age in 2020



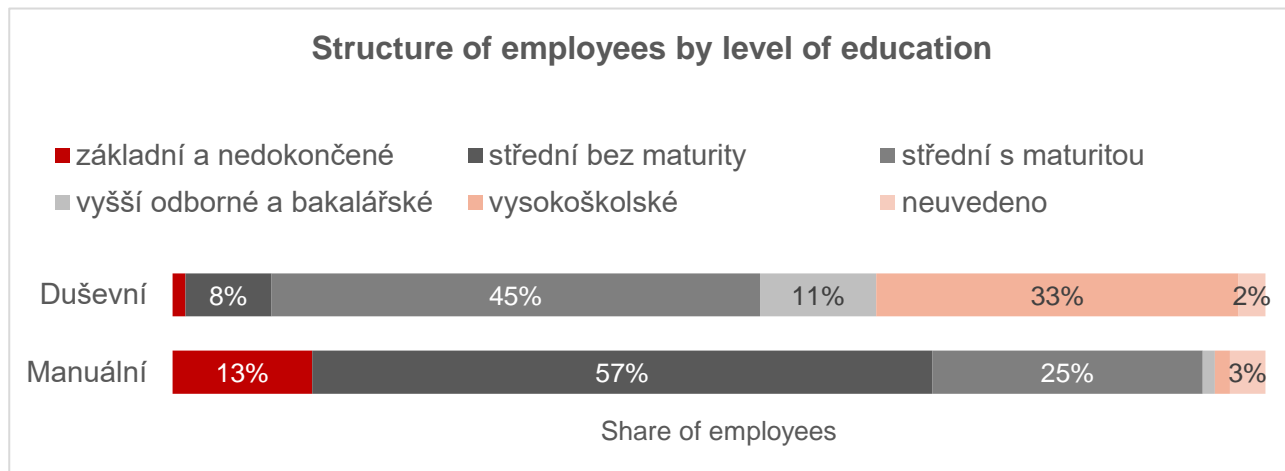
Source: ISPV (MLSA). Data valid as of 8 April 2021.

	under 20 yrs	20–29 yrs	30–39 yrs	40–49 yrs	50–59 yrs	60 yrs and over	men	women
Total – non-manual		manual						
Woman – non-manual		manual						
Men – non-manual		manual						

In general, jobs with a non-manual nature of work require a higher level of educational attainment, which is confirmed in Figure 3. The most represented educational group for **non-manual jobs** are employees with a **secondary school-leaving exam (SSLE; 45%)**. The second most numerous group are employees with a **university degree (33%)**. For **manual jobs**, it can be said that more than half (**57%**) are employees with **secondary education without a SSLE**. Compared to the non-manual jobs, there is also a higher proportion of employees with primary and incomplete education (13% in manual and 1% in non-manual jobs). A quarter of manual workers are secondary school graduates with a SSLE.

Jobs in the field of **plant and machine operators and assemblers** (major group 8 of the CZ-ISCO job classification) typical for **manual jobs**, which is shown in Figure 4. These jobs make up **36%** of manual jobs. The second most represented group of jobs are **craft and related trades workers** (major group 7), which are performed by **27%** of manual workers. A typical group of jobs for **non-manual** workers are **technicians and associate professionals** (major group 3), including **41%** of non-manual workers. The second place is taken by **professionals** (major group 2). **30%** of non-manual workers belong to this group.

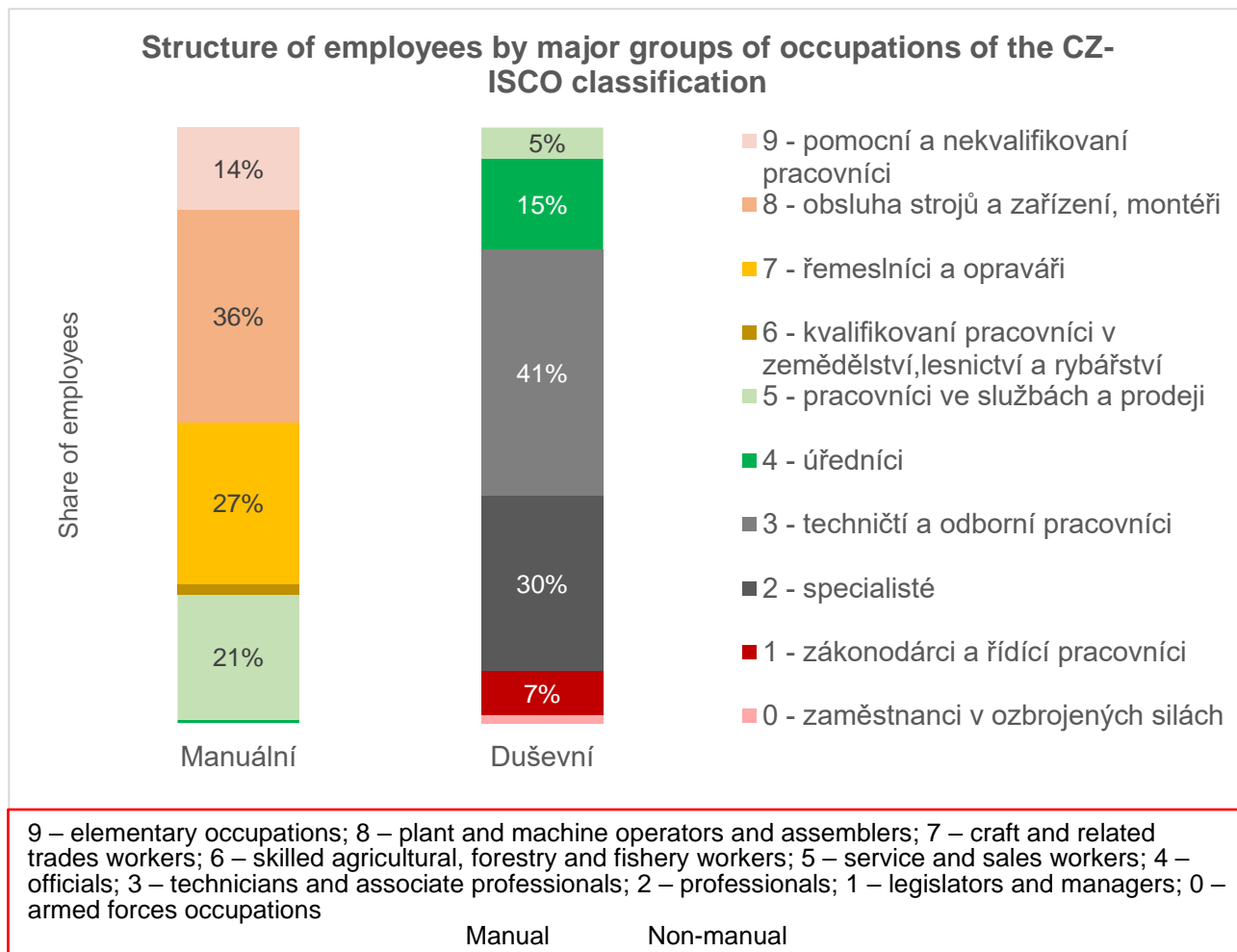
Figure 3: Structure of manual and non-manual workers by educational attainment in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

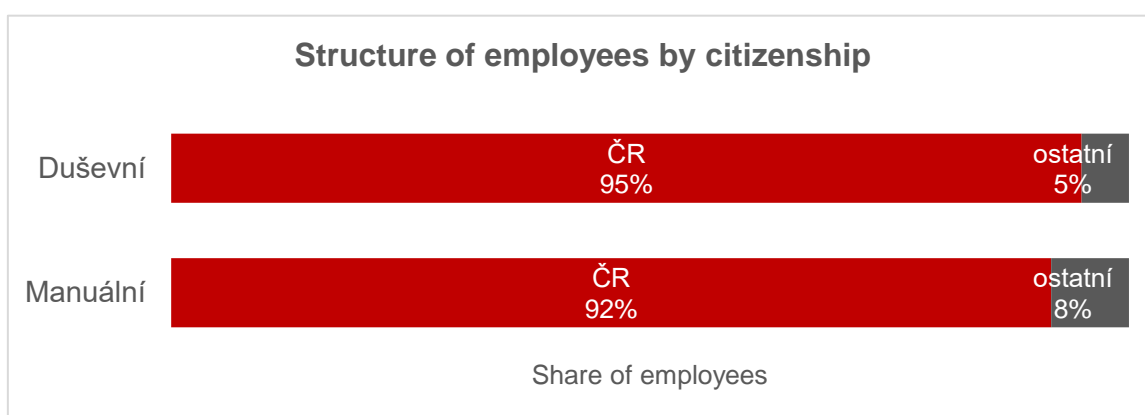
primary and incomplete tertiary technical and bachelor	secondary without SSLE university	secondary with SSLE not specified
Non-manual		
Manual		

Figure 4: Structure of manual and non-manual workers by occupation in 2020



A significant group of employees consists of workers with **citizenship other than Czech** in the Czech labour market. We observe a **higher share** of foreign workers in **manual jobs** (8% in manual and 5% in non-manual), see Figure 5. The specific **most represented** citizenship is shown in Figure 6. These are most often **Slovaks** (42%), **Ukrainians** (9%) and **Russians** (7%) in **non-manual** jobs. The largest group consists of **Ukrainians** (35%), then **Slovaks** (24%), followed by **Poles** (11%) in **manual** jobs.

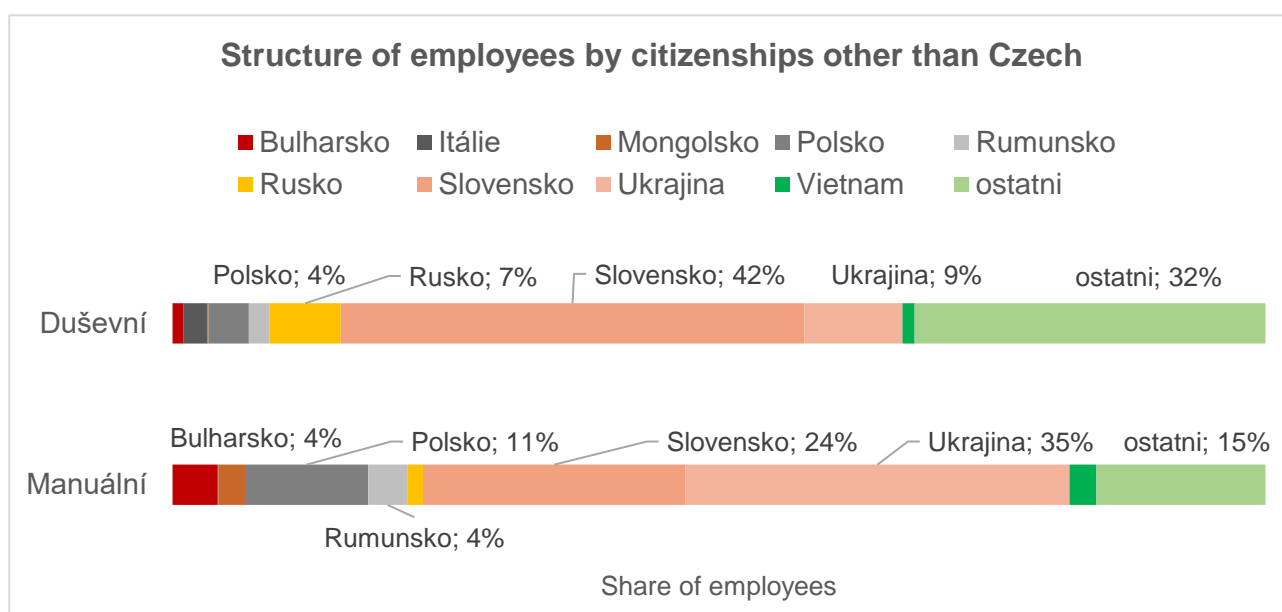
Figure 5: Structure of manual and non-manual workers by citizenship in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

Non-manual	CR	other
Manual	CR	other

Figure 6: Structure of manual and non-manual workers of other citizenship in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

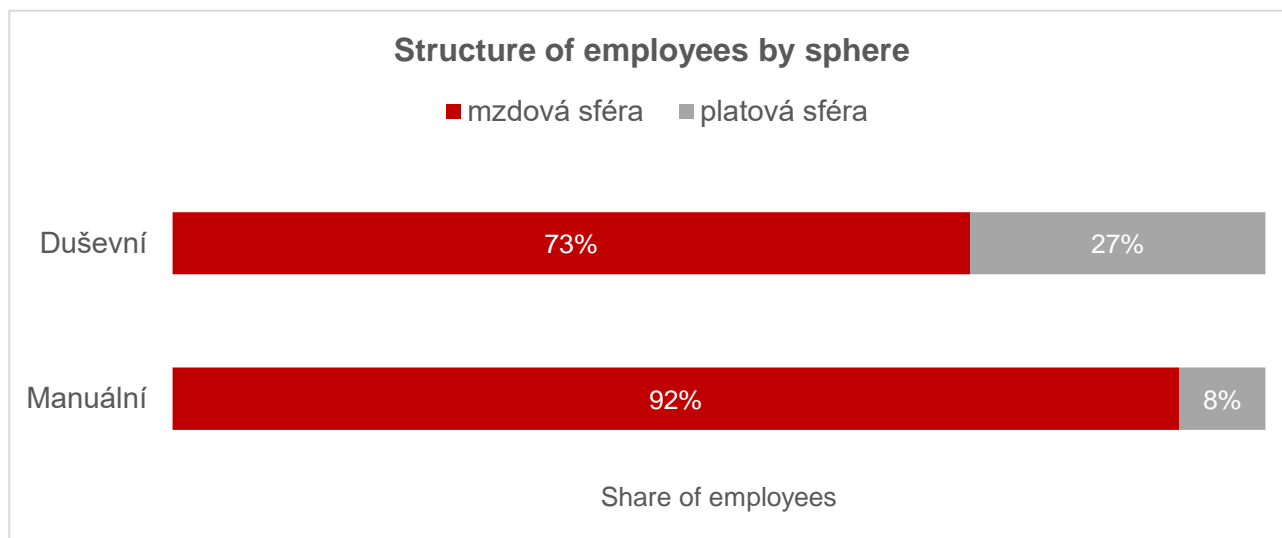
Bulgaria	Italy	Mongolia	Poland	Romania	
Russia	Slovakia	Ukraine	Vietnam	other	
Manual	Poland	Russia	Slovakia	Ukraine	other
Non-manual	Bulgaria	Romania	Poland	Slovakia	Ukraine

1.2 Characteristics of employers

The difference between manual and non-manual types of jobs is also reflected in the different characteristics of employers which these employees work for. This subchapter summarizes the structure of manual and non-manual workers according to the size of the employer, sphere, industry and business ownership.

Figure 7 shows the structure of employees by **sphere**. It was already said at the beginning of the chapter that the **salary** sphere is typical for non-manual jobs, but more employees on the labour market are employed in the wage sphere. **27%** of all **non-manual** jobs are employees working in the salary sphere. Other non-manual workers, i.e. up to 73%, work in the wage sphere. It is **8%** of employees in the salary sphere and up to 92% in the wage sphere in **manual jobs**. It follows from this fact that most manual and non-manual workers work in the wage sphere.

Figure 7: Structure of manual and non-manual workers by sphere in 2020

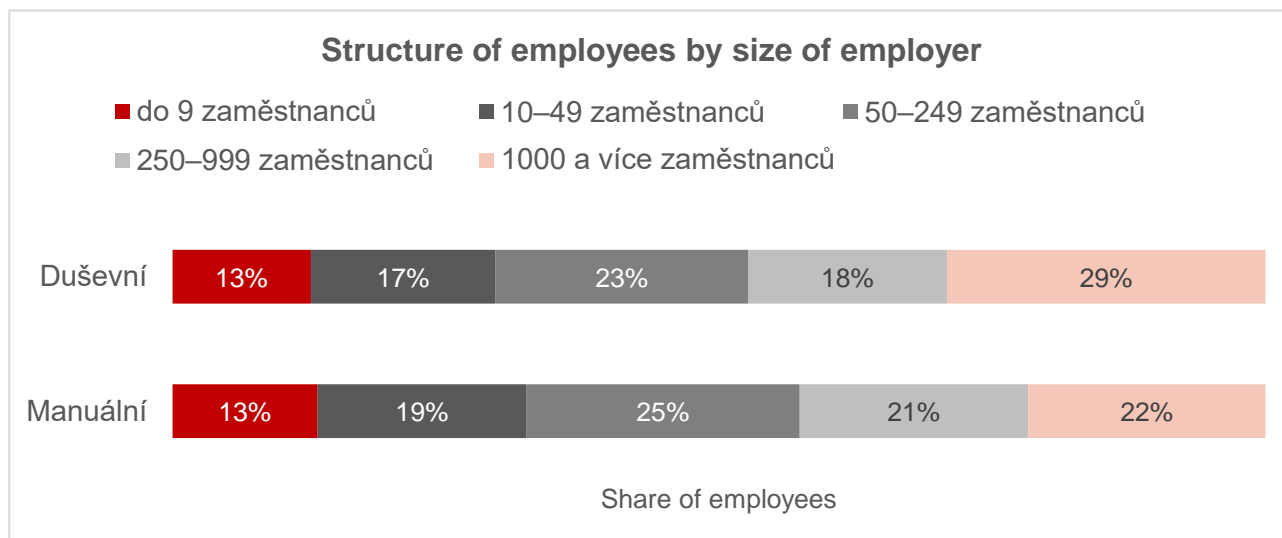


Source: ISPV (MLSA). Data valid as of 8 April 2021.

	wage sphere	salary sphere
Non-manual		
Manual		

The structure in terms of the **size category** of the employer is shown in Figure 8. In general, the highest share of employees works for employers with a size category of **1,000 or more employees**. There is also the highest difference between the structure of manual and non-manual workers in this category. Typically, there are **more non-manual** workers than manual workers (29% non-manual and 22% manual workers).

Figure 8: Structure of manual and non-manual workers by size of employer in 2020

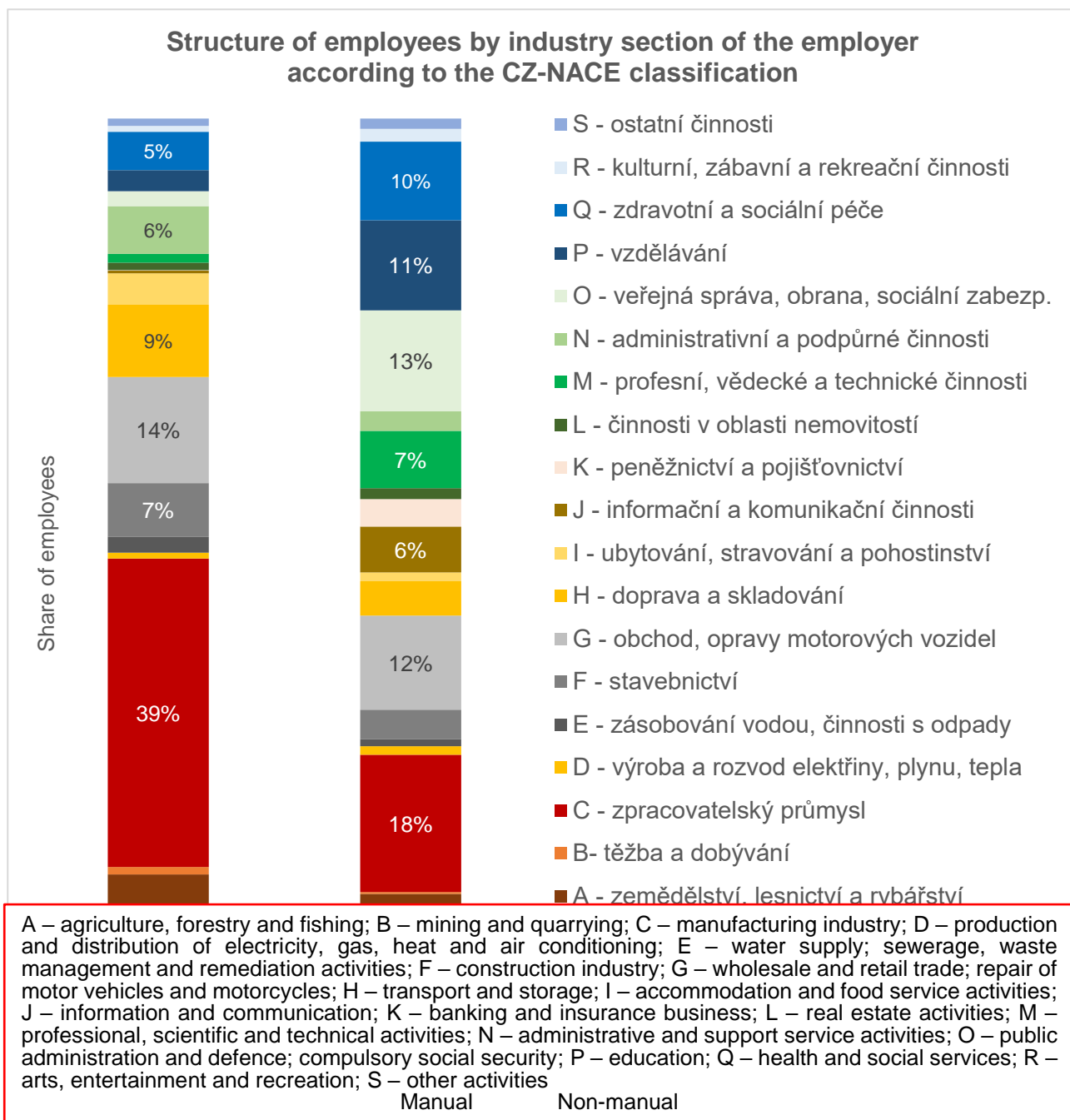


Source: ISPV (MLSA). Data valid as of 8 April 2021.

up to 9 employees	10–49 employees	50–249 employees
250–999 employees	1000 and more employees	
Non-manual		
Manual		

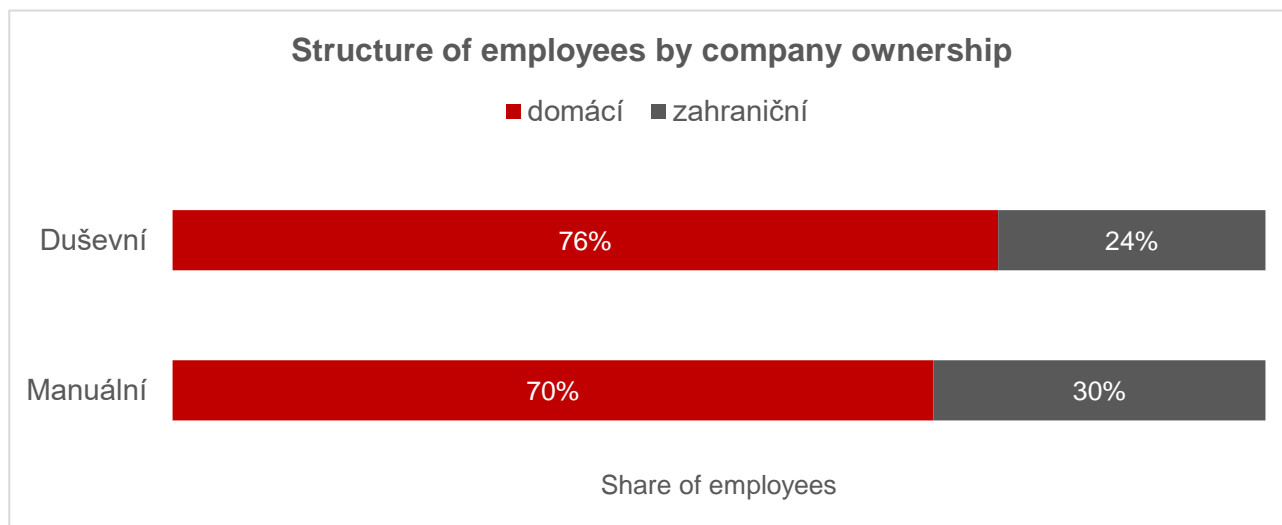
A typical **industry** in which **manual workers** work is the **manufacturing industry** (section C of the CZ-NACE classification), which is confirmed in Figure 9. It is **39%** of manual workers. The second most represented section is **trade and repair of motor vehicles** (section G of the CZ-NACE classification). The structure is more divided between individual industries in **non-manual** jobs. The highest share is also made up of the **manufacturing industry** (section C), but it is only **18%** in comparison with manual workers. The second most represented industry is **public administration, defence and social security** (section O), where **13%** of non-manual workers work. A higher share of employees compared to manual workers can be observed, for example, in professional scientific and technical activities (section M; 7% of non-manual workers) or information and communication activities (section J; 6% of non-manual workers).

Figure 9: Structure of manual and non-manual workers by main industry activities of employer in 2020



Another specific characteristic of the employer may be domestic or foreign **ownership**. Figure 10 shows that **manual workers** (30%) have a slightly higher proportion of **foreign employers** than non-manual workers (24%).

Figure 10: Structure of manual and non-manual workers by company ownership in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

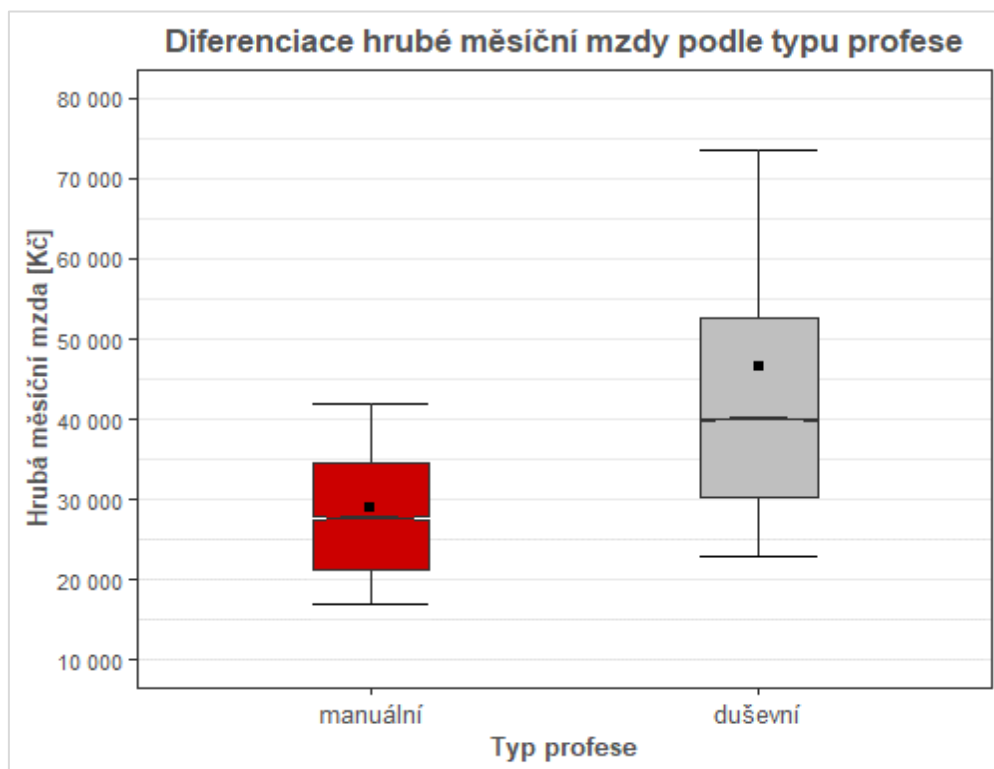
	domestic	foreign
Non-manual		
Manual		

1.3 Level of remuneration

One of the important aspects in assessing the position of employees in the labour market is to examine the **pay gap**. The different nature of the work of manual and non-manual workers is clearly reflected in the level of remuneration. Figure 11 shows that the earnings of **manual workers** are **significantly lower** than the earnings of employees with a non-manual type of occupation. The **median** gross monthly wage of manual workers is **less than CZK 28,000** and of **non-manual** workers **almost CZK 40,000**. The difference between the medians is up to CZK 12,000.

The distribution of wages according to the box plots shows that **most manual** workers receive **a lower wage than half of all non-manual** workers. The ninth decile of the wage distribution of manual workers is almost at the level of the median wage of non-manual workers. **The ninth decile of manual** workers is **CZK 42,000** and the median value of non-manual workers is CZK 40,000. It follows from this fact that the differences between manual and non-manual workers are not only in their structure, but **significant differences are evident in the level of remuneration**. The following figures therefore focus on a more detailed identification of the pay gap between manual and non-manual workers in terms of gender, age, education of employees or the size or ownership of the employer.

Figure 11: Differentiation of wages of manual and non-manual workers in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

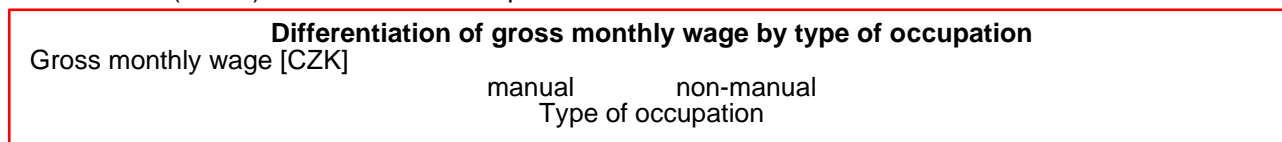
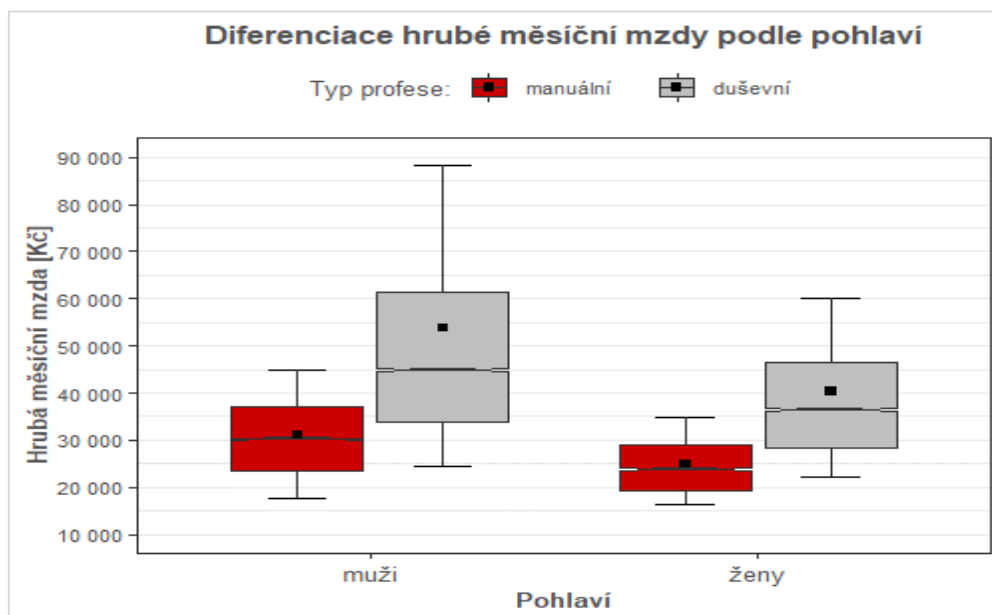


Figure 12 shows the **gender** pay gap. The trend of most manual workers receiving less monthly wage than half of their non-manual workers persists for both men and women. **The median wage of manually working men is CZK 30,000** per month and it is almost **CZK 24,000** per month for **women**. The median wage of **men** with a **non-manual** character of work is **almost CZK 45,000** per month and it is about **CZK 36,000** per month for **women**.

The figure also reveals that the **gender pay gap** is also evident when divided into groups of manual and non-manual workers. The level of **remuneration of women** is **usually lower** compared to men, regardless of whether they work in manual or non-manual positions. The difference between the medians of men and women is CZK 6,000 in manual positions and CZK 9,000 per month in non-manual positions.

Figure 13 illustrates the situation by **age groups**. The highest median gross monthly wage is reached by manual workers in the age group of 30–39 years (over CZK 28,000) and non-manual workers in the age group of 40–49 years (over CZK 41,000). It can be also said that the wages of manual workers are less different in individual age groups compared to the wages of non-manual workers.

Figure 12: Differentiation of wages of manual and non-manual workers by gender in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

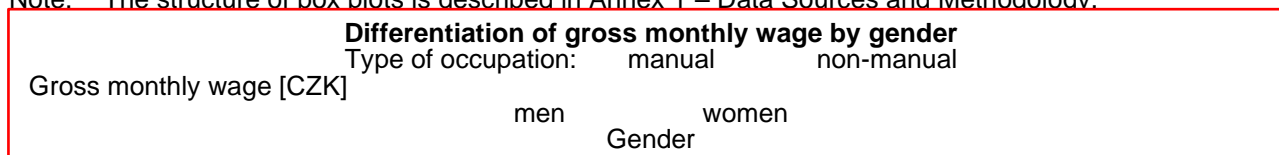
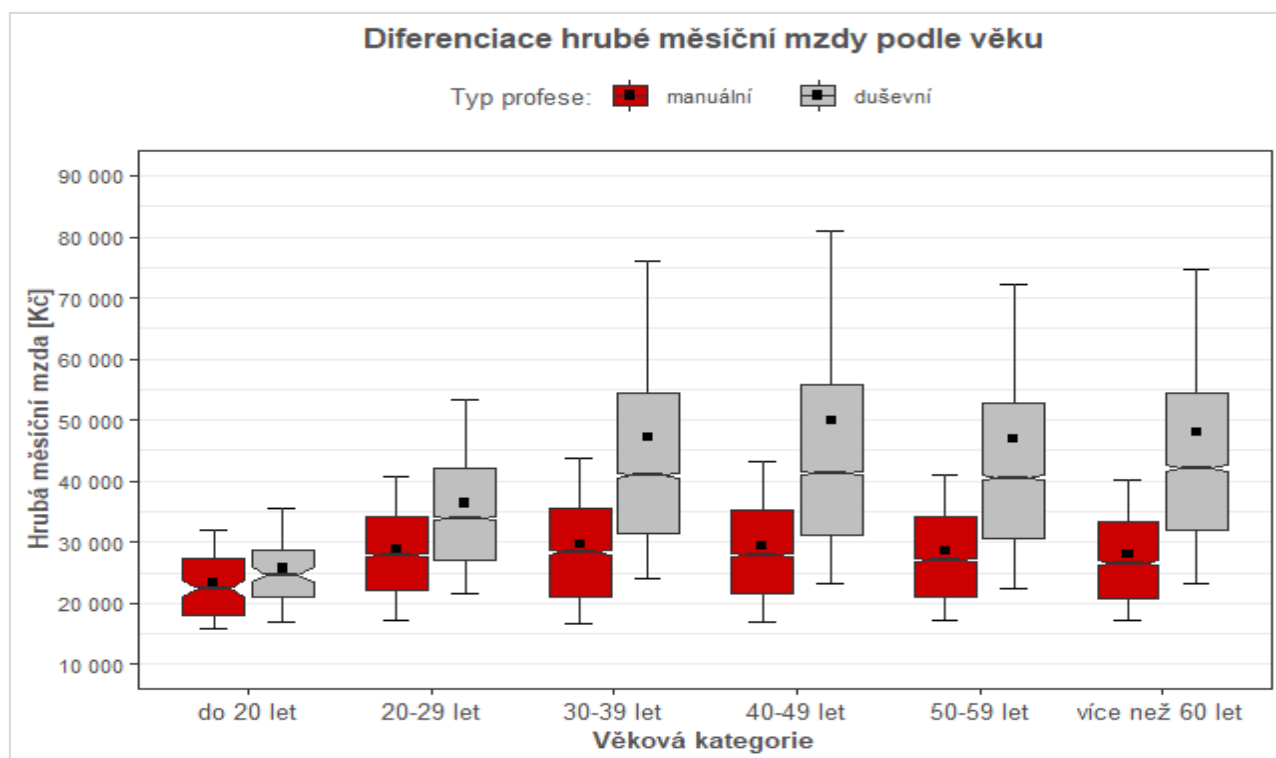
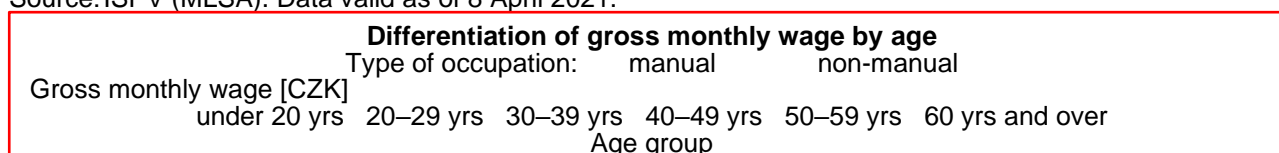


Figure 13: Differentiation of wages of manual and non-manual workers by age in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

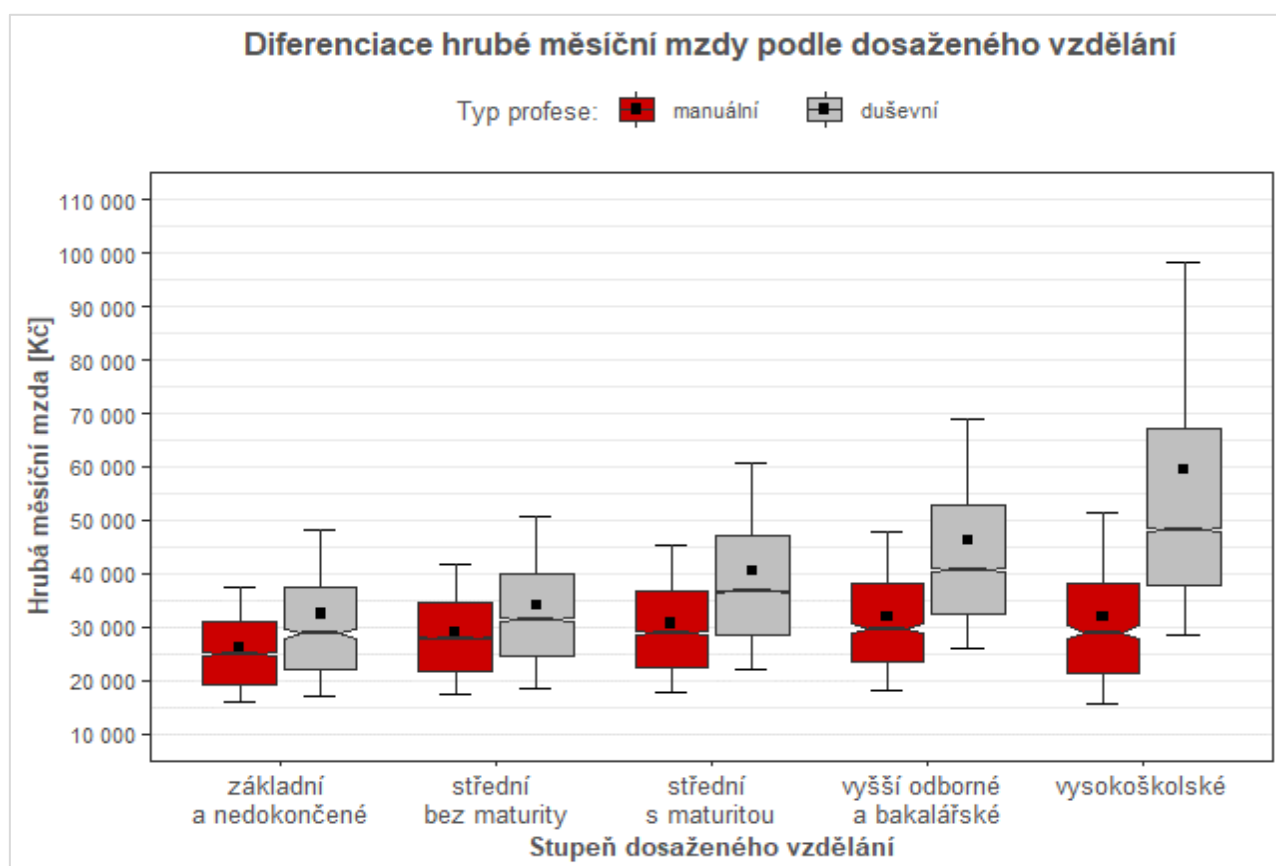
Source: ISPV (MLSA). Data valid as of 8 April 2021.



The differentiation of the gross monthly wage of manual and non-manual workers according to the achieved **level of education** is shown in Figure 14. The median gross monthly wage has an increasing trend with increasing level of education for both groups of employees. However, employees with the non-manual character of work have a higher median wage than employees working manually at all levels of education.

The trend of increasing level of remuneration with a higher level of education is much more pronounced in non-manual workers. The **median** gross monthly wage is **almost CZK 37,000** for the group of non-manual workers with **secondary education with a SSLE**, which is also one of the most numerous groups by education. The median gross monthly wage is over **CZK 48,000** for **university-graduate** non-manual workers. The difference between the medians is CZK 11,000. On the contrary, the median gross monthly wage of **manual secondary school graduates with a SSLE** is **almost CZK 29,000** and of **university graduates** also **almost CZK 29,000**. There is almost no difference between the medians. For the most represented group of **manual** workers by education, i.e. **secondary school graduates without a SSLE**, the median gross monthly wage is **roughly CZK 28,000**.

Figure 14: Differentiation of wages of manual and non-manual workers by education in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

Differentiation of gross monthly wage by educational attainment

Type of occupation: manual non-manual

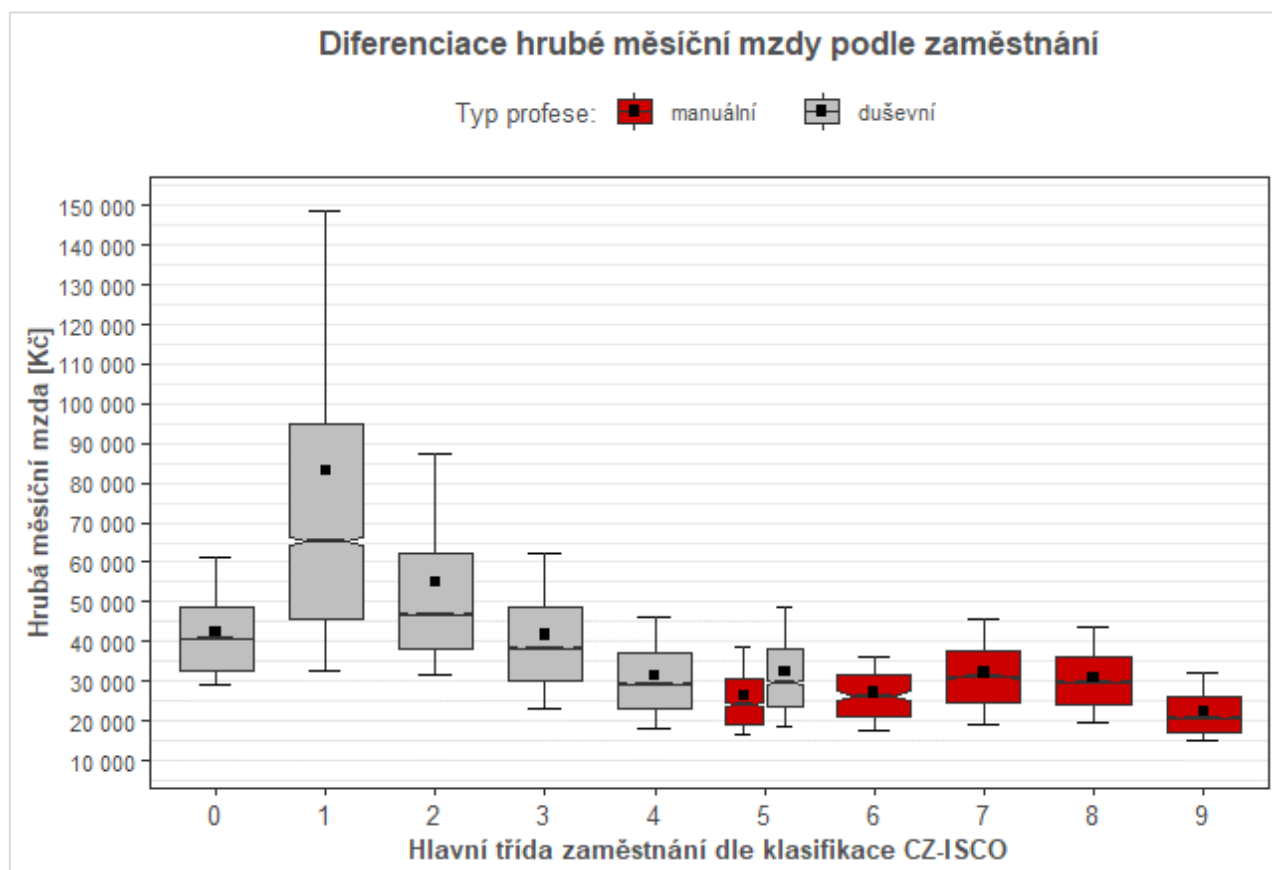
Gross monthly wage [CZK]

primary and incomplete secondary without SSLE secondary with SSLE tertiary technical and bachelor university

Level of educational attainment

Employees' earnings also vary according to the **job** performed, which is shown in Figure 15 capturing the differentiation of wages according to the major groups of occupations by the CZ-ISCO classification. The **highest earnings** are achieved by **non-manual workers** in major group 1 – **legislators and managers** (median gross monthly wage is over CZK 65,000). The highest median gross monthly wage among **manual workers** is achieved by employees in major group 7 – **craft and related trades workers**, where the median value is almost CZK 31,000 per month. On the contrary, the **lowest median** wage is observed in **non-manual workers** in major group 4 – **officials** (almost CZK 25,000) and in **manual workers** in major group 9 – **elementary occupations** (CZK 21,000).

Figure 15: Differentiation of wages of manual and non-manual workers by occupation according to the major groups of the CZ-ISCO classification in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology. Data for manual workers in major group 4 according to CZ-ISCO do not meet the publication criteria.

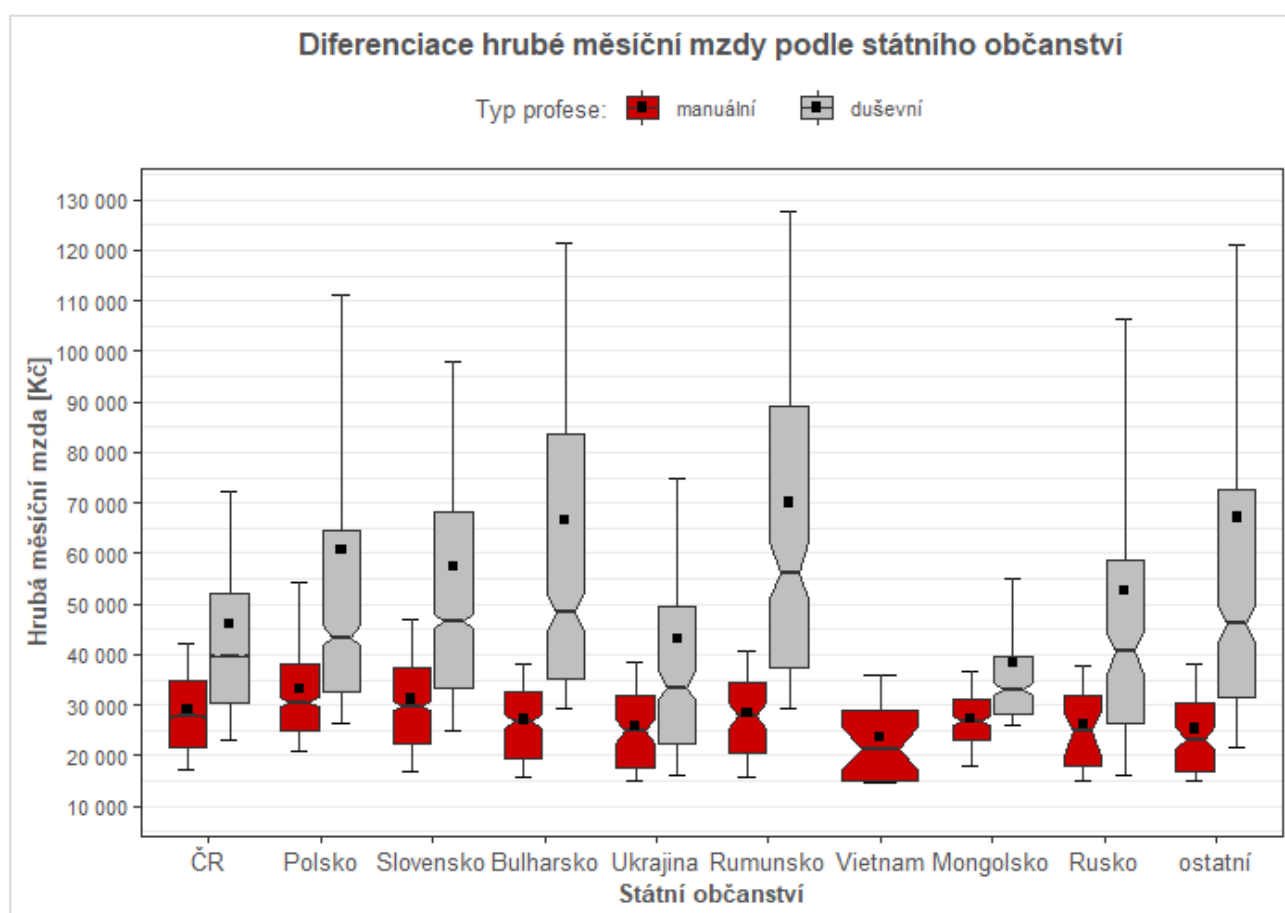
Source: ISPV (MLSA). Data valid as of 8 April 2021.

Differentiation of gross monthly wage by occupation

Type of occupation: manual non-manual
Gross monthly wage [CZK]
Major group of occupations of the CZ-ISCO classification

The level of remuneration of the most represented groups of employees **by citizenship** is shown in Figure 16. The highest median wage is received by **manual workers from Poland** (almost CZK 31,000) and **non-manual workers from Romania** (CZK 56,000). On the contrary, the **lowest median** gross monthly wage is received by **manual workers from Vietnam** (CZK 21,000) and **non-manual workers from Mongolia** (less than CZK 33,000). The figure also shows that wage differentiation is significantly more uneven for non-manual workers by citizenship than for manual workers from individual countries.

Figure 16: Differentiation of wages of manual and non-manual workers by citizenship in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology. Data for non-manual workers with Vietnamese citizenship do not meet the publication criteria.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

Differentiation of gross monthly wage by citizenship

Type of occupation: manual non-manual

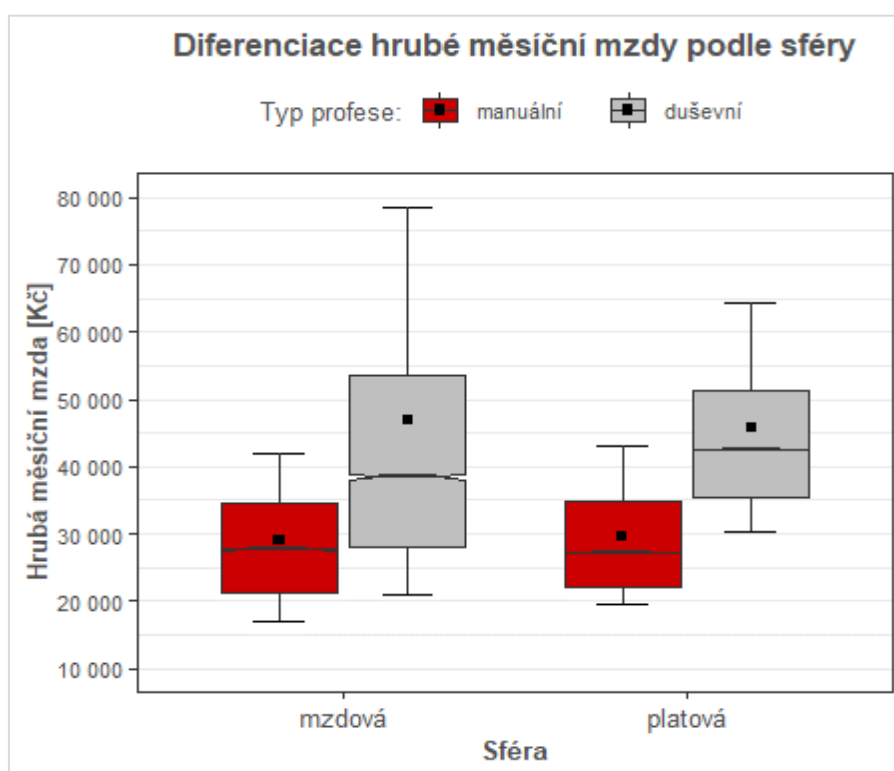
Gross monthly wage [CZK]

CR Poland Slovakia Bulgaria Ukraine Romania Vietnam Mongolia Russia other
Citizenship

From the point of view of the sphere, we observe that **manual workers** in the **wage and salary** spheres have relatively **comparable earnings**. The median gross monthly wage of

manual workers in the wage sphere is almost CZK 28,000 and in the salary sphere over CZK 27,000. The median salary of non-manual workers in the salary sphere is almost CZK 46,000 and the median wage in the wage sphere is over CZK 38,000. However, the **wages of non-manual workers in the wage sphere** are much **more differentiated** than the wages of non-manual workers in the salary sphere, especially **upwards**, as shown in the box plot in Figure 17.

Figure 17: Differentiation of wages of manual and non-manual workers by sphere in 2020



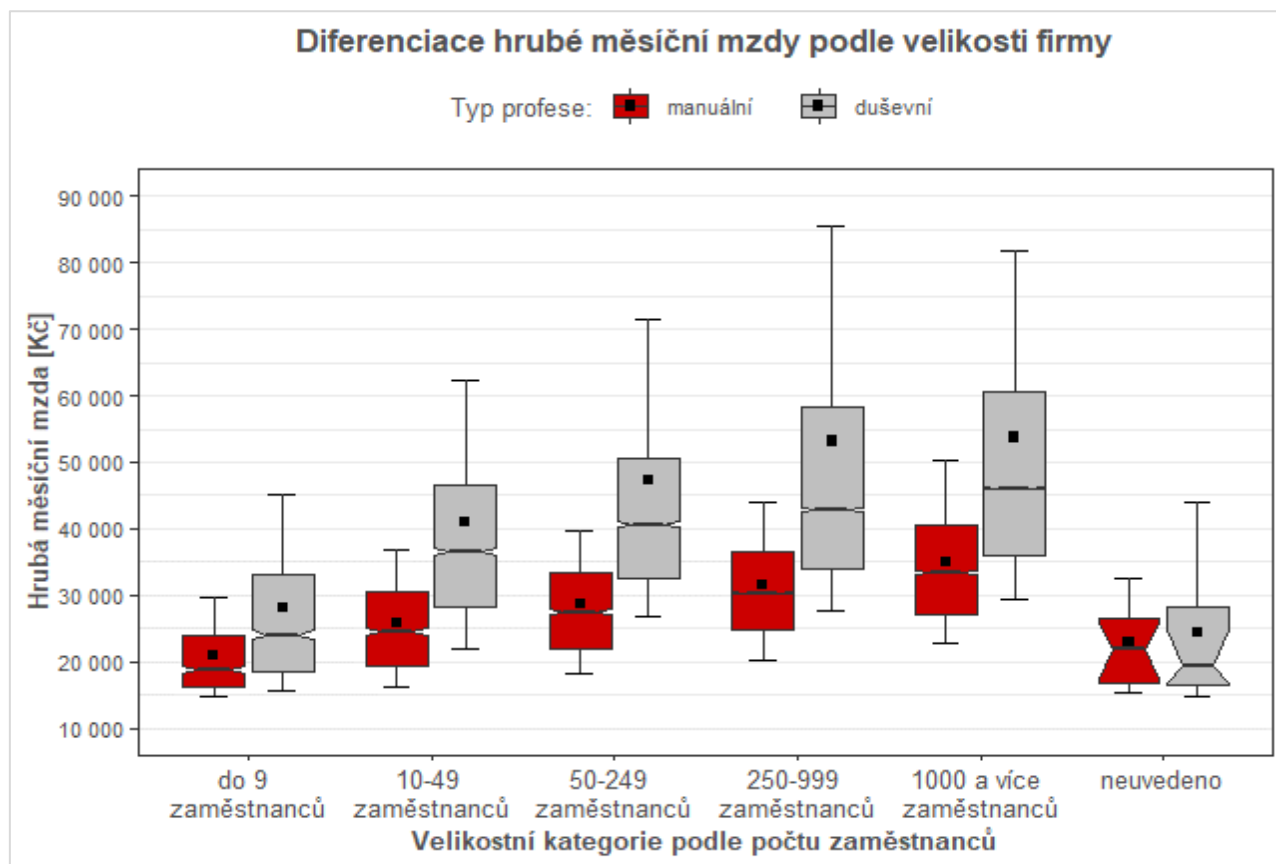
Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

Differentiation of gross monthly wage by sphere
Type of occupation: manual non-manual
Gross monthly wage [CZK]
wage salary
Sphere

It is clear from Figure 18 that the **earnings** of manual and non-manual workers **increase with the growing number of employees in the company**. The highest median gross monthly wage is received by employees in the size category of 1,000 or more employees. For manual workers, the median wage is over CZK 33,000 and for non-manual workers over CZK 46,000. The difference between the medians is CZK 13,000.

Figure 18: Differentiation of wages of manual and non-manual workers by size category of employer in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

Differentiation of gross monthly wage by company size

Type of occupation: manual non-manual

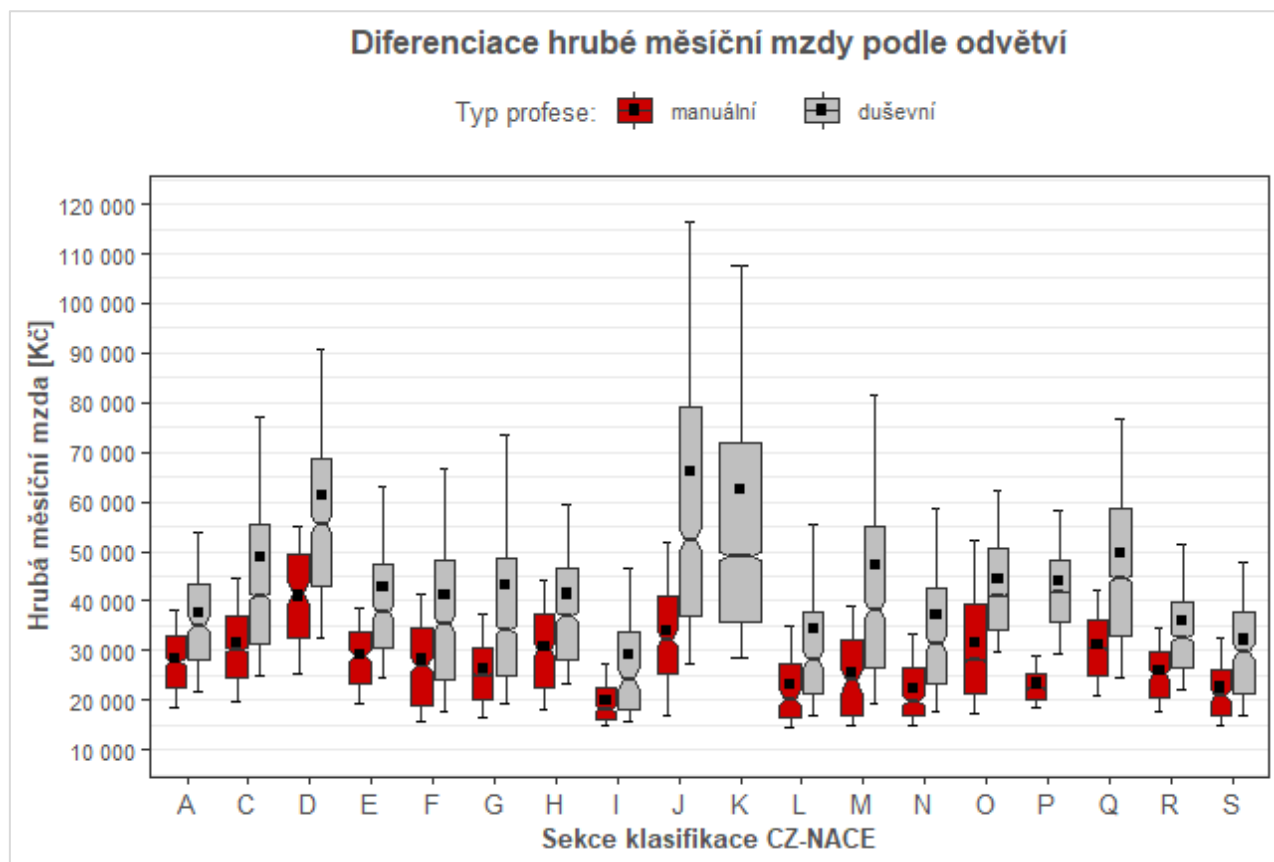
Gross monthly wage [CZK]

up to 9 employees 10–49 employees 50–249 employees 250–999 employees 1000 and more
employees not specified

Size category by number of employees

In terms of **industry**, we observe the **highest** median wages of manual and non-manual workers in the **production and distribution of electricity, gas, heat and air conditioning** (section D of the CZ-NACE classification) and they amount to almost CZK 42,000 for manual and over CZK 55,000 for non-manual workers; see Figure 19. **The lowest** median wages are for **non-manual and manual** workers in industry I – **Accommodation and food service activities** (non-manual CZK 24,000 per month and manual CZK 18,000 per month).

Figure 19: Differentiation of wages of manual and non-manual workers by industry of the CZ-NACE classification section in 2020



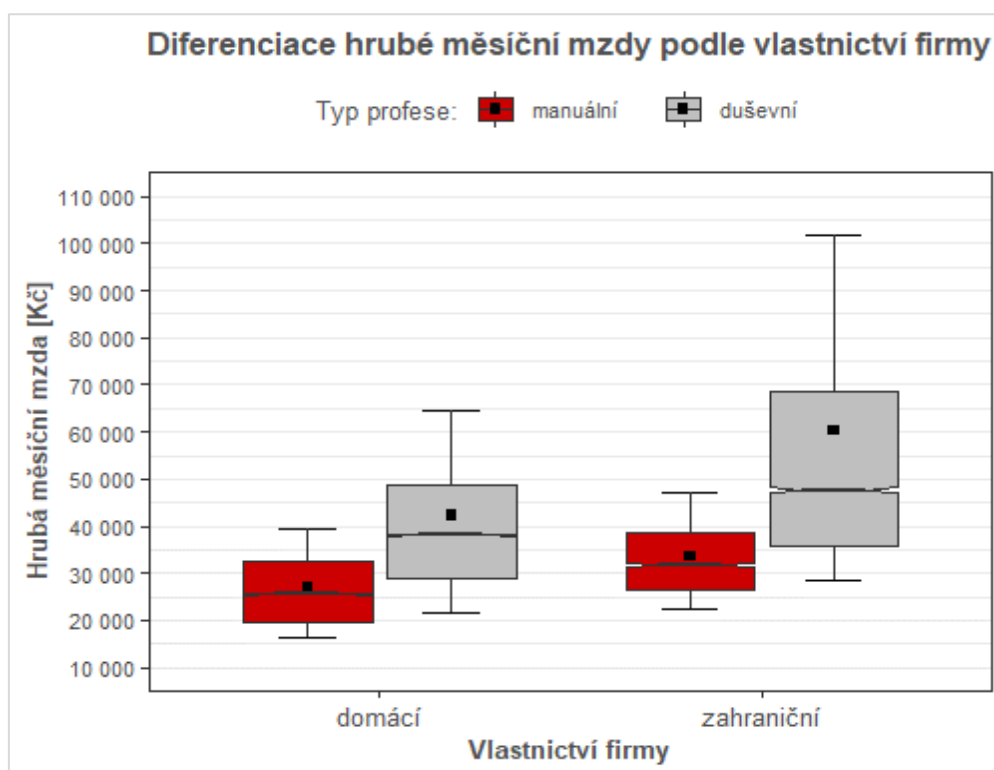
Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology. Data for workers in section B and manual workers in section K of the CZ-NACE classification do not meet the publication criteria.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

Differentiation of gross monthly wage by industry
Type of occupation: manual non-manual
Gross monthly wage [CZK]
CZ-NACE classification section

The situation according to the **company ownership** is illustrated by Figure 20. The median **wage** of manual and non-manual workers is **higher in foreign-owned companies**. The median gross monthly wage is almost CZK 32,000 for manual and almost CZK 48,000 for non-manual workers. The figure also reveals **higher wage inequality** in **non-manual** workers in **foreign-owned** companies, especially **upwards**.

Figure 20: Differentiation of wages of manual and non-manual workers by employer ownership in 2020



Note: The structure of box plots is described in Annex 1 – Data Sources and Methodology.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

Differentiation of gross monthly wage by company ownership
Type of occupation: manual non-manual
Gross monthly wage [CZK]
domestic foreign
Company ownership

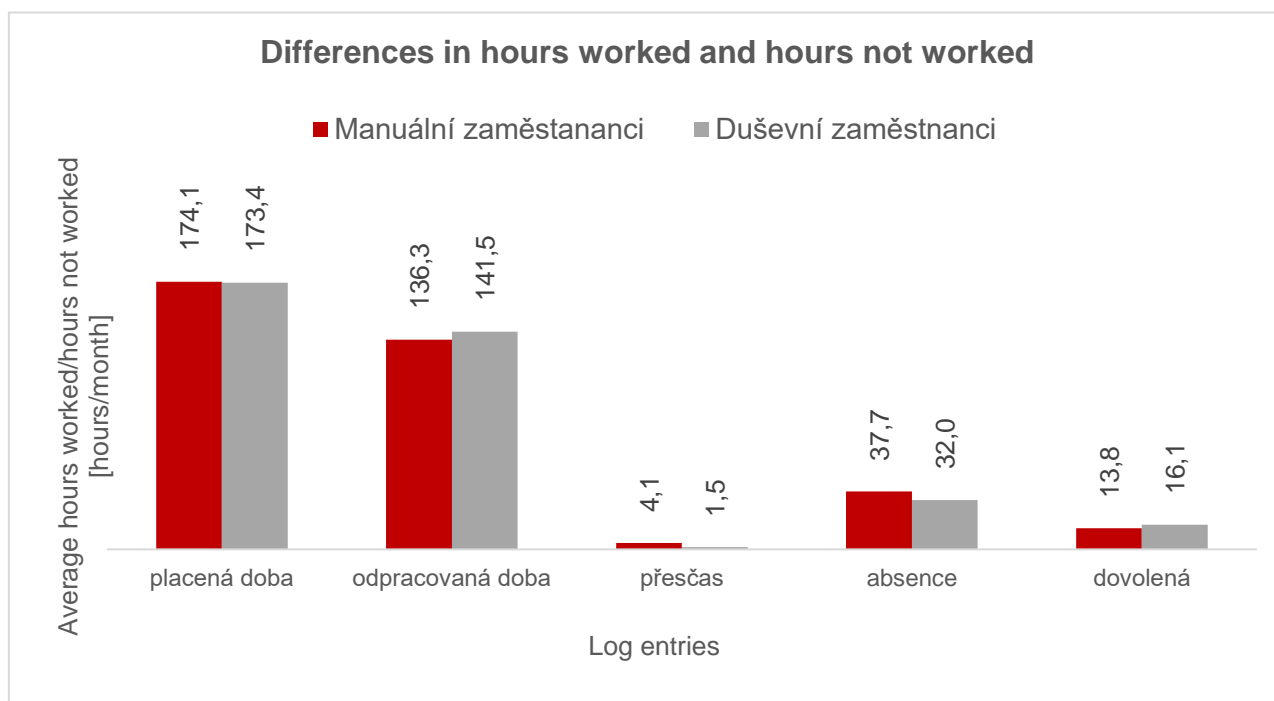
1.4 Working hours

The differences between manual and non-manual workers in terms of their structure and level of remuneration were described in detail in the previous subchapters. In order to further assess the position of these two groups of employees in the labour market, it is also necessary to examine working conditions through the range of working hours. The following subchapter therefore compares the differences in hours worked, overtime and absences of manual and non-manual workers.

In general (according to Figure 21), on average, **manual** workers have slightly **higher hours paid** (174.1 hours per month) than non-manual workers (173.4 hours per month), while **non-**

manual workers have more hours worked¹ (141.5 hours per month) than manual workers (136.3 hours per month). Manual workers have a higher average overtime (4.1 hours per month) than non-manual workers (1.5 hours per month). **Higher absences** are also observed in **manual** workers (37.7 hours per month) compared to non-manual workers (32.0 hours per month). **On average, non-manual workers take more time for leave** (16.1 hours per month). Leave is 13.8 hours per month on average in manual workers. The results of the statistics for 2020 may be affected by the coronavirus pandemic, especially in the area of hours worked. Overall, however, we have long observed these differences in hours worked and absences between manual and non-manual workers. This means that manual workers have higher hours paid and overtime and absences. On the other hand, we observe higher hours worked and leave in non-manual workers in the long term.

Figure 21: Average hours paid, hours worked, overtime, absences and leave of manual and non-manual workers in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

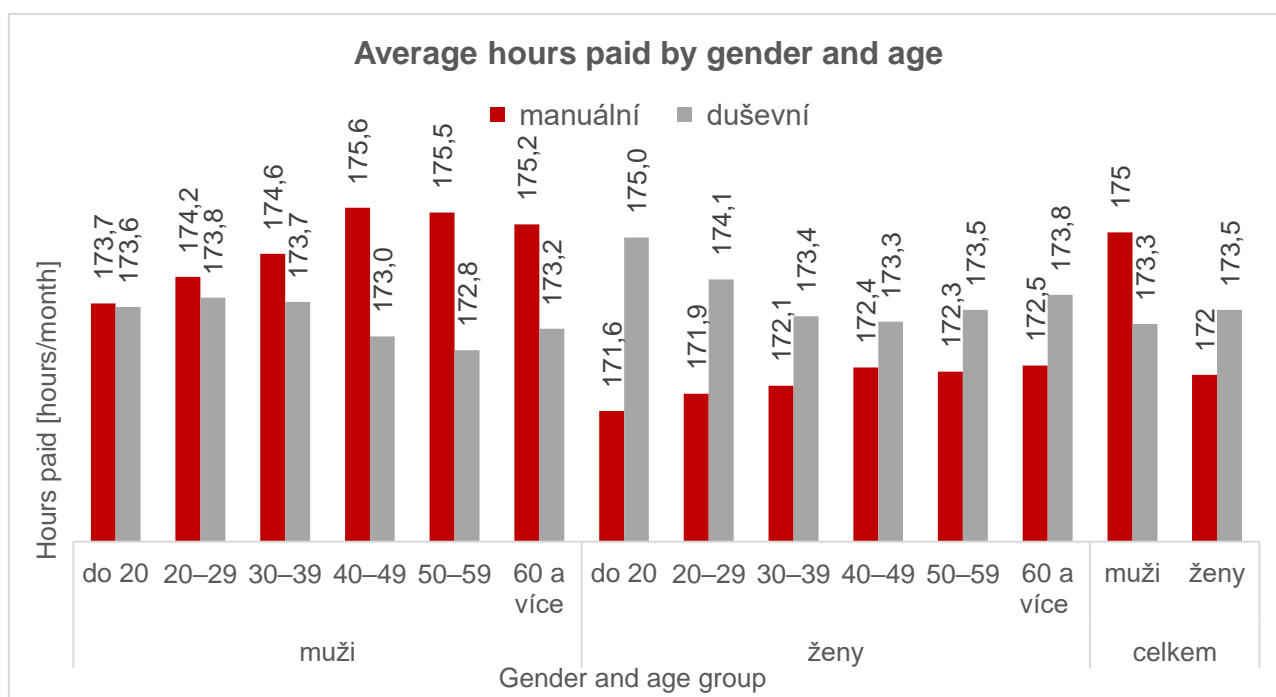
Manual workers		Non-manual workers		
hours paid	hours worked	overtime	absence	leave

¹ Total hours worked includes the average hours worked per month, including overtime. Total hours paid include the time worked and the time not worked due to leave, holidays on otherwise working days, important obstacles on the part of the employee, etc.

Figure 22 shows the **average hours paid by gender and age**. The figure shows that the **differences** between men and women are especially noticeable in **manual workers**. Manual **men** have average **hours paid of 175 hours per month** and **women 172 hours per month**. Whereas the hours paid are **173.3 hours in men** with a non-manual type of job and **173.5 hours in women**. Overall, manual workers have higher average hours paid than non-manually working men, but the opposite is true for women. Non-manually working women have higher average hours paid than women in manual positions.

We also observe differences in hours paid between manual and non-manual workers by age groups. A trend can be identified where **hours paid increase with age** for both **men and women working manually**. The growth stops in the age group of 40–49 years in men and they have the highest average hours paid in this category (175.6 hours per month). The highest hours paid in women is in the age group of 60 years and over (172.5 hours per month). However, we observe a different trend for **non-manual workers**. The **average hours paid for non-manually working men decreases with age** (with the exception of the age group of 60 years and over) and the highest hours paid are for employees in the age group 20–29 (173.8 hours per month) and in the age group under 20 years in women (175 hours per month). There is a different trend in the development of hours paid for non-manually working **women**. We observe a **decrease in hours paid in reproductive age**, probably due to the care of children or other family members, and the average hours paid increase again with increasing age.

Figure 22: Hours paid of manual and non-manual workers by gender and age in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

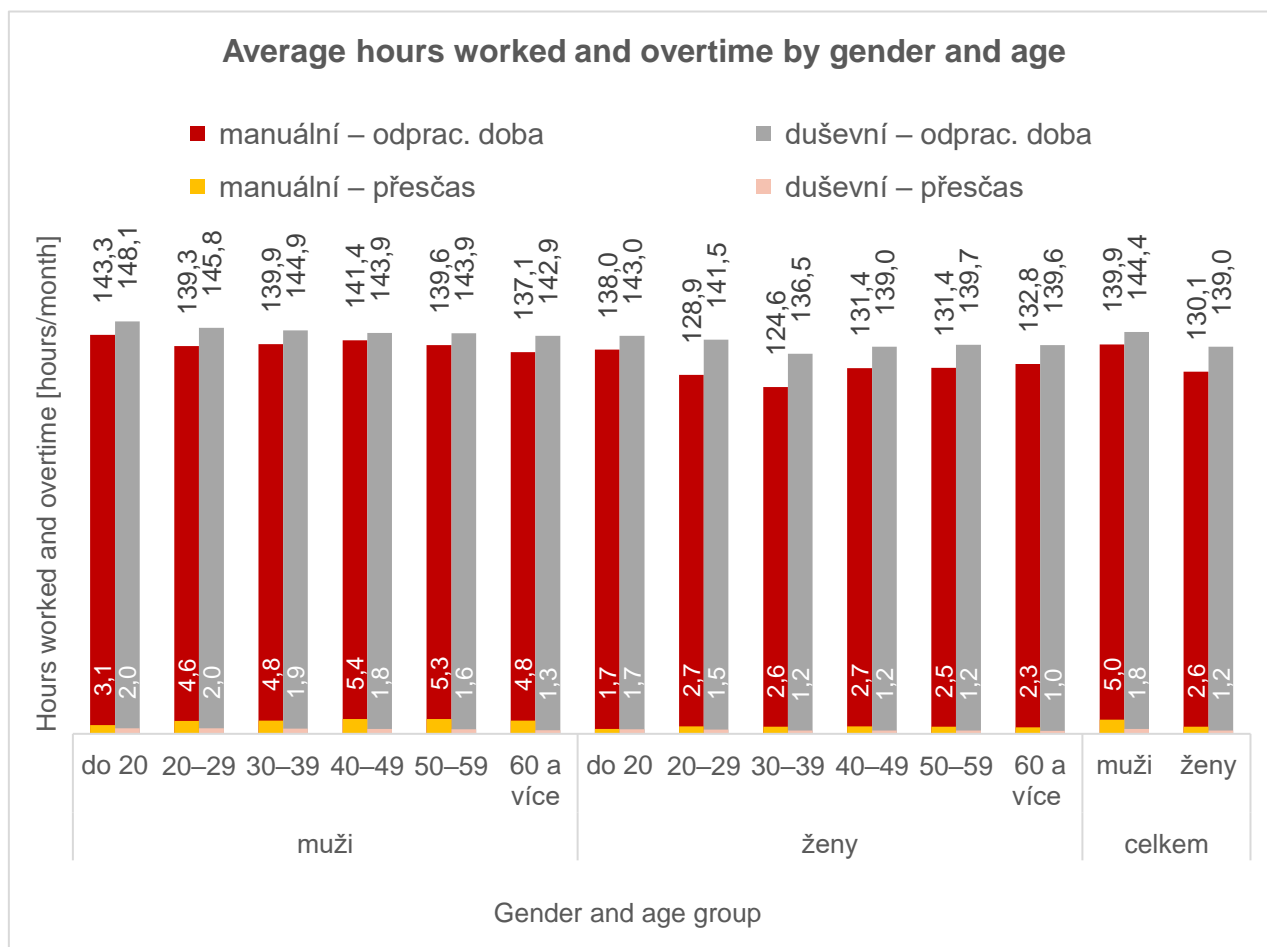
under 20 ... 60 and more men	manual under 20 ... 60 and more women	non-manual under 20 ... 60 and more women	men total	women total
---------------------------------	---	---	--------------	----------------

Hours worked and overtime by gender and age are shown in Figure 23. Overall, **men have higher hours worked and overtime** compared to women. **Manual men work 5 hours overtime** per month and **women 2.6 hours** on average. It is **1.8 hours for men and 1.2 hours for women** in **non-manual workers**.

In terms of age groups, it can be stated that the **hours worked decrease slightly with age in men** and **fluctuate around the reproductive age in women**, regardless of the manual or non-manual nature of work. Overall, however, non-manual workers have higher hours worked in all age groups.

In terms of overtime, we observe the **highest overtime** in **manual workers in men aged 40 to 60 years** (5.4 hours per month in the age group of 40–49 years) and **women in the age groups of 20–29 and 40–49 years** (2.7 hours per month).

Figure 23: Hours worked and overtime of manual and non-manual workers by gender and age in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked
manual – overtime
under 20 ... 60 and more
men

non-manual – hours worked
non-manual – overtime
under 20 ... 60 and more
women

men
women
total

Figure 24 focuses on the total **average absences and the average leave** by gender and age. Here it can be stated that the average **absences** are **higher in manual men and women** compared to non-manual workers and **non-manual** workers have **higher amount of leave** on average compared to manual workers.

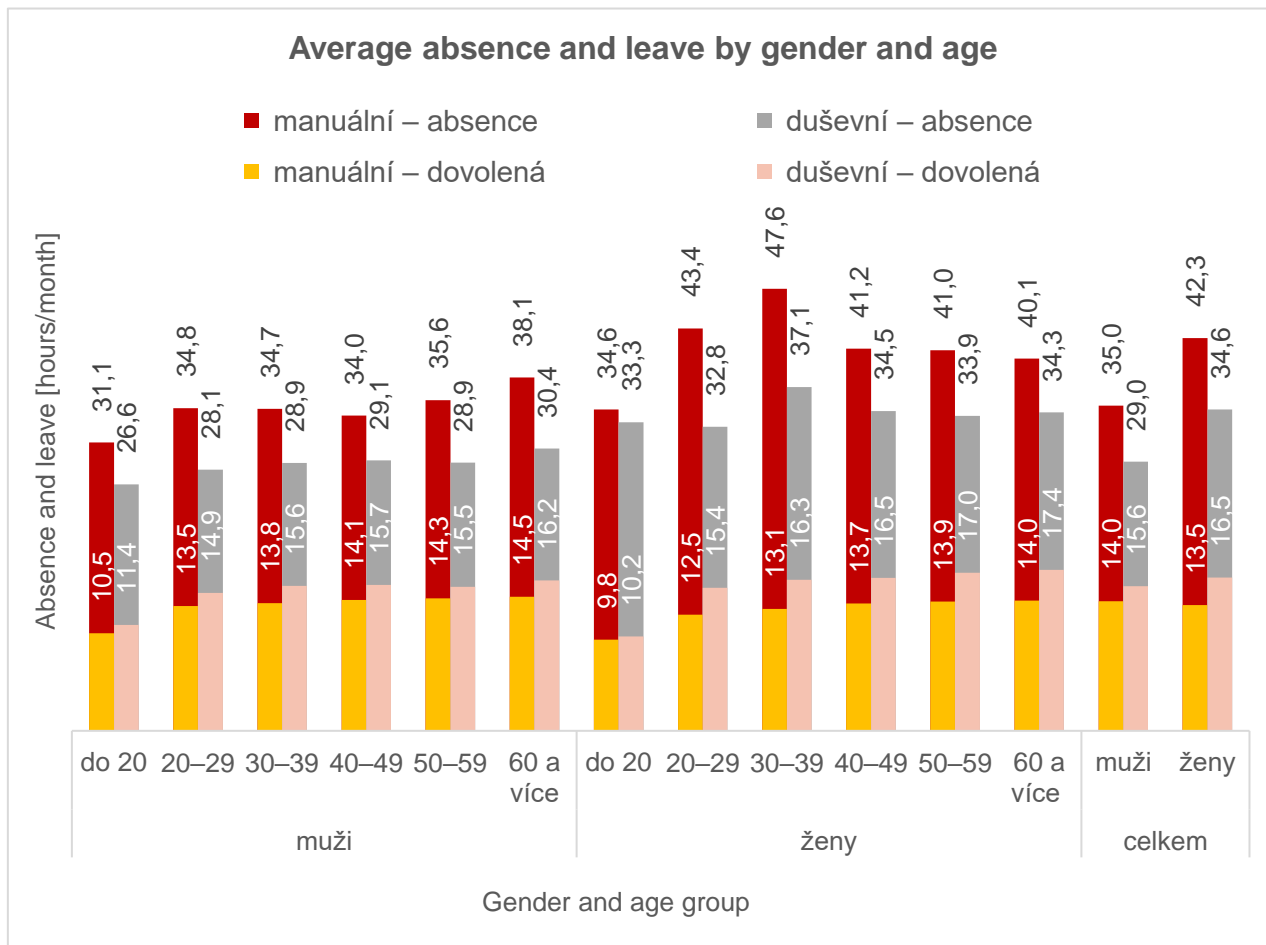
Manually working women have significantly **higher absences** compared to manually working men (42.3 hours per month in women and 35 hours per month in men). This difference is due to the higher sickness rate of manually working women. Manual **women** have an average **leave lower** than men (14 hours per month in men and 13.5 hours per month in women on average).

Absences are lower in **non-manual** workers. Women have an average of 34.6 hours of absences and men 29 hours. **Non-manually working women** have the **highest average leave** (16.5 hours per month). It is 15.6 hours per month in non-manually working men.

In terms of **age groups**, we observe higher average absences in manual jobs compared to non-manual ones in all age groups. The **highest absences** are among **manually working men** in the age group of **60 years and over** (38.1 hours per month) and **women** in the age group of **30–39 years** (47.6 hours per month). Both **manually working men and women** in the age group **under 20 years** have the **lowest** absences (31.1 hours per month in men and 34.6 hours in women). Although **non-manual** workers have lower absences, we observe extremes **in the same age groups**. The highest average are non-manual workers in the age group of 60 years and more in men (30.4 hours in men) and women in the age group of 30–39 years (37.1 hours per month). Non-manually working men in the age group under 20 years (26.6 hours per month) and women in the age group of 20–29 years (32.8 hours per month) have the lowest absences.

The average amount of leave copies a similar trend. Overall, it is higher for men and women with a non-manual type of occupation in all age groups compared to manual ones. **The most** time on leave is spent by **non-manually and manually working men aged 60 years and over** (14.5 hours in manual workers and 16.2 hours in non-manual workers). The highest average leave is also in the age group **over 60 years in women** (14 hours for manual workers and 17.4 hours for non-manual workers).

Figure 24: Absence and leave of manual and non-manual workers by gender and age in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

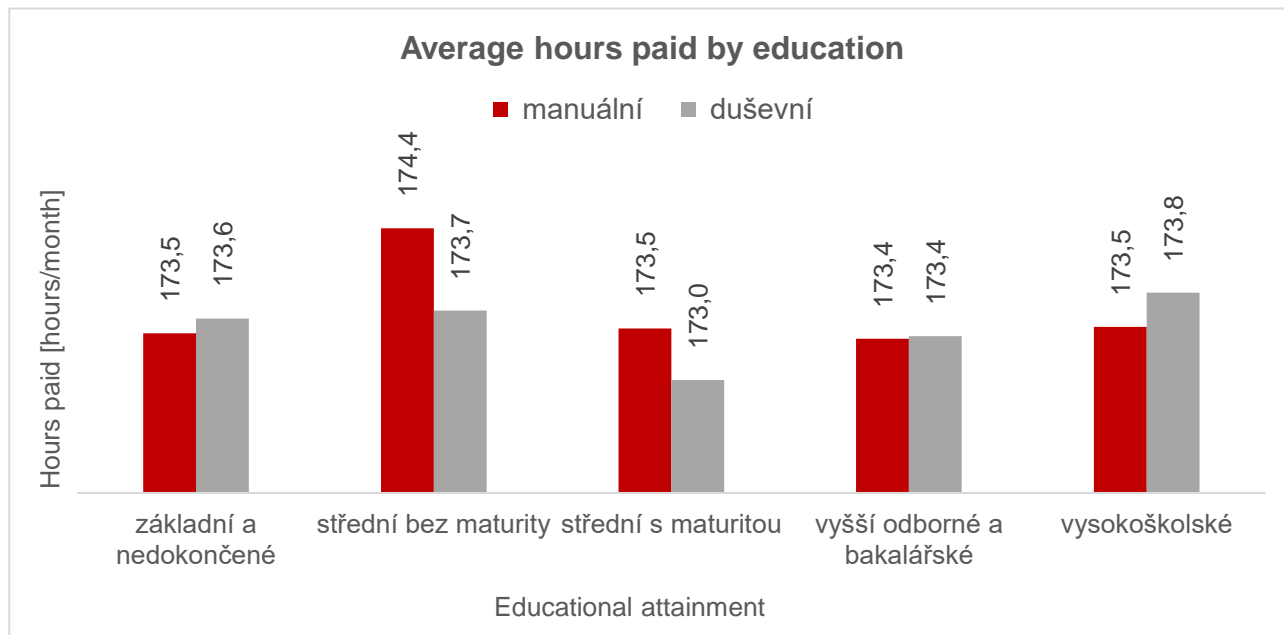
manual – absence	non-manual – absence	
manual – leave	non-manual – leave	
under 20 ... 60 and more	under 20 ... 60 and more	men women
men	women	total

The diagram of average **hours paid** by level of **education** is in Figure 25. The biggest differences between the hours paid of manual and non-manual workers are observed in secondary school graduates. **The lowest hours paid are in non-manual workers with a SSLE (173 hours per month).** On the other hand, **manually working secondary school graduates without a SSLE have the highest hours paid (174.4 hours per month).**

In terms of **hours worked** (Figure 26), **manual workers with primary and incomplete education have the lowest average monthly hours worked (133.8 hours per month).** **Non-manual workers have higher hours worked at all levels of education and the highest is observed among university graduates (143.1 hours per month).**

Manual workers have higher overtime and secondary school graduates without a SSLE have the highest overtime (4.3 hours per month). **University graduates with the non-manual character of work have the lowest average overtime (1.1 hours per month on average).**

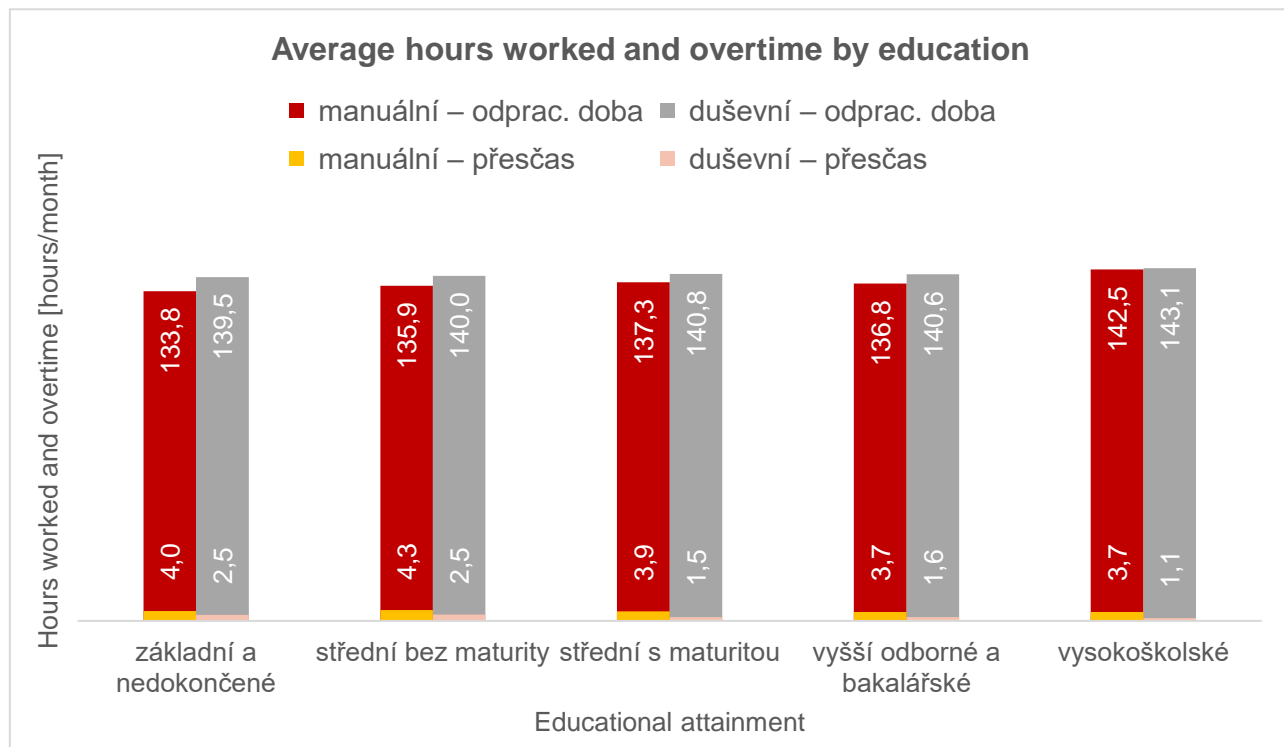
Figure 25: Hours paid of manual and non-manual workers by education in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual
primary and incomplete secondary without SSLE
non-manual
secondary with SSLE tertiary technical and bachelor university

Figure 26: Hours worked and overtime of manual and non-manual workers by education in 2020



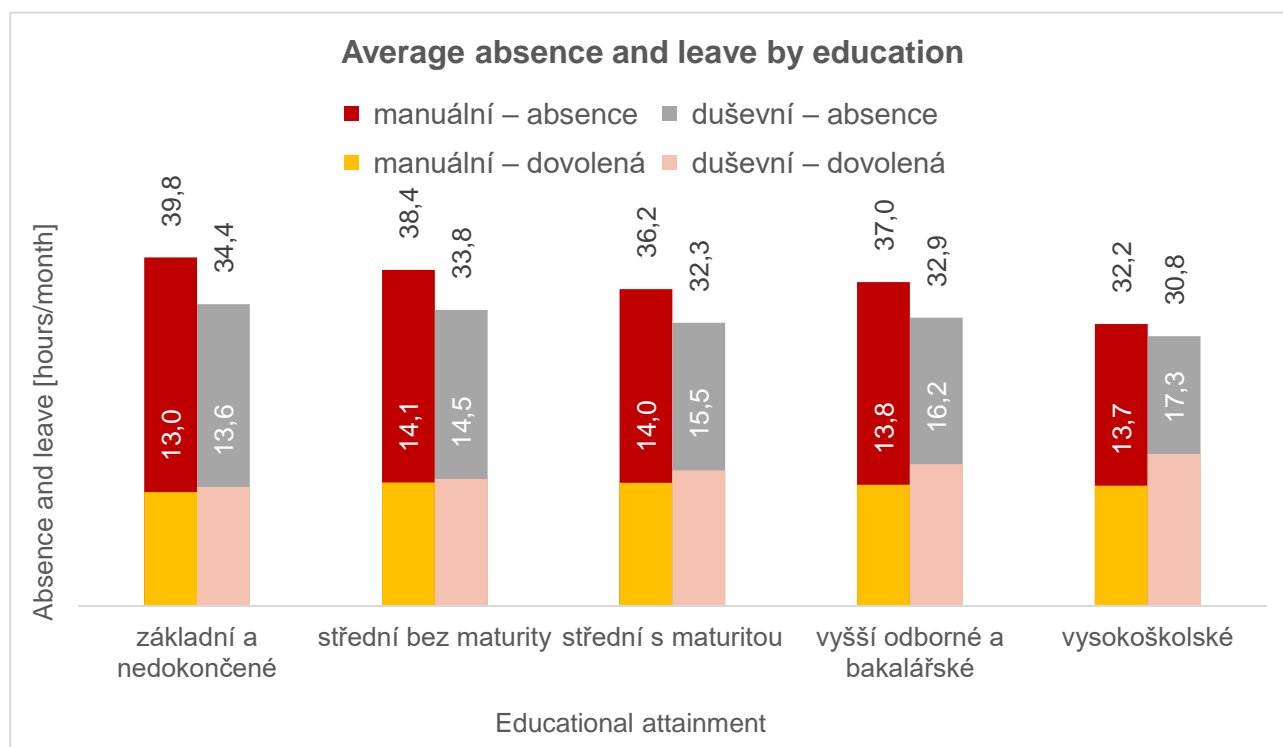
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked
primary and incomplete secondary without SSLE
non-manual – hours worked
secondary with SSLE tertiary technical and bachelor university
manual – overtime
non-manual – overtime

Figure 27 shows that the average absence for both manual and non-manual workers decreases with increasing level of education. Thus, **manual workers with primary and incomplete education** have the **highest absences** (39.8 hours per month) and **non-manual workers with university education** the **lowest** (30.8 hours per month).

The **highest average leave** is in **university students with a non-manual** character of work (17.3 hours per month) and the **lowest** in **manual workers with primary and incomplete education** (13 hours per month).

Figure 27: Absence and leave of manual and non-manual workers by education in 2020

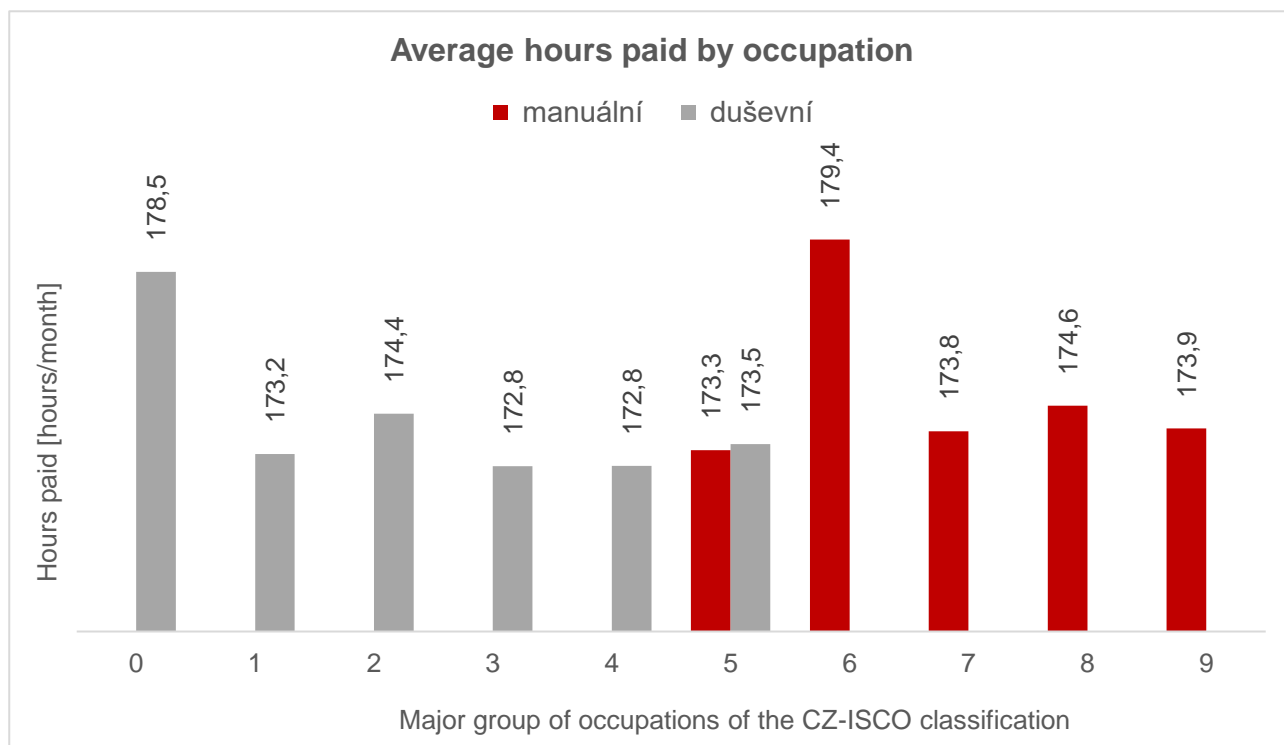


Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – absence non-manual – absence
 manual – leave non-manual – leave
 primary and incomplete secondary without SSLE secondary with SSLE tertiary technical and bachelor university

The results **by the major groups of occupations of the CZ-ISCO classification** are shown in Figure 28. The figure clearly shows that the **high hours paid** mainly concern employees in major group 6 – **skilled agricultural, forestry and fishery workers** (179.4 hours per month). The **lowest** hours paid are for **non-manual workers**, namely in major groups 3 – **technicians and associate professionals** and 4 – **officials** (172.8 hours per month each).

Figure 28: Hours paid of manual and non-manual workers by occupation according to the major groups of the CZ-ISCO classification in 2020



Note: Data for manual workers in major group 4 of the CZ-ISCO classification do not meet the publication criteria. The names of each major group of occupations of the CZ-ISCO classification are given in Table II in Annex 2.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual	non-manual
--------	------------

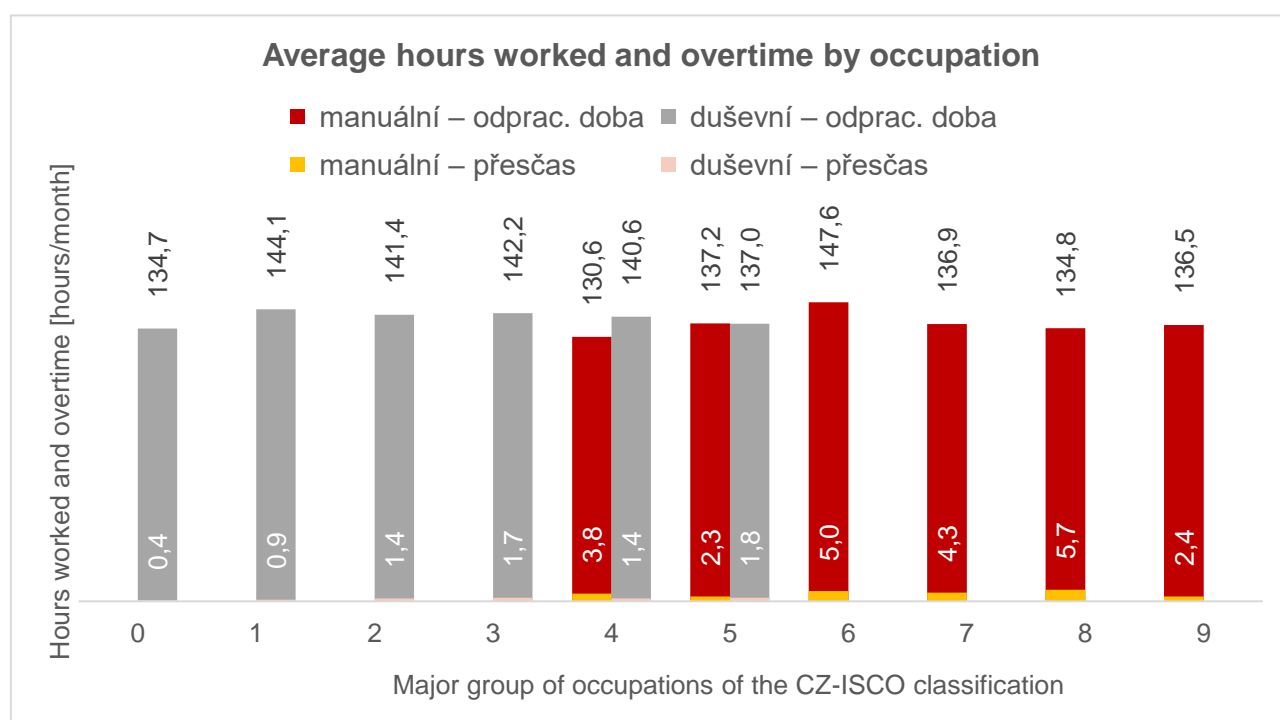
The average hours worked and overtime by major groups of occupations of the CZ-ISCO classification are shown in Figure 29. Employees in major group 6 – **skilled agricultural, forestry and fishery workers** have the **highest hours worked** (147.6 hours per month). **The lowest** hours worked is then observed in **manual** workers in major group 4 – **officials** (130.6 hours per month)².

The highest overtime is reported by employees in major group 8 – **plant and machine operators and assemblers** (5.7 hours per month). On the contrary, we observe the **lowest** overtime in major group 0 – **employees in the armed forces** (0.4 hours per month) and 1 – **legislators and managers** (0.9 hours per month).

² According to the CZ-ISCO classification of occupations, the group of manual workers includes, for example, postal sorters, letter postmen and motorized postmen.

In terms of absences, Figure 30 shows that the **highest absences** are reported by employees in major group 0 – **employees in the armed forces** (44.2 hours per month on average) and the **lowest** by employees in major group 1 – **legislators and managers** (29.1 hours per month). **High average leave** is enjoyed most by employees in major group 0 – **employees in the armed forces** (19.5 hours per month) and the **least** by employees in major group 9 – **elementary occupations** (13.1 hours per month).

Figure 29: Hours worked and overtime of manual and non-manual workers by occupation according to the major groups of the CZ-ISCO classification in 2020



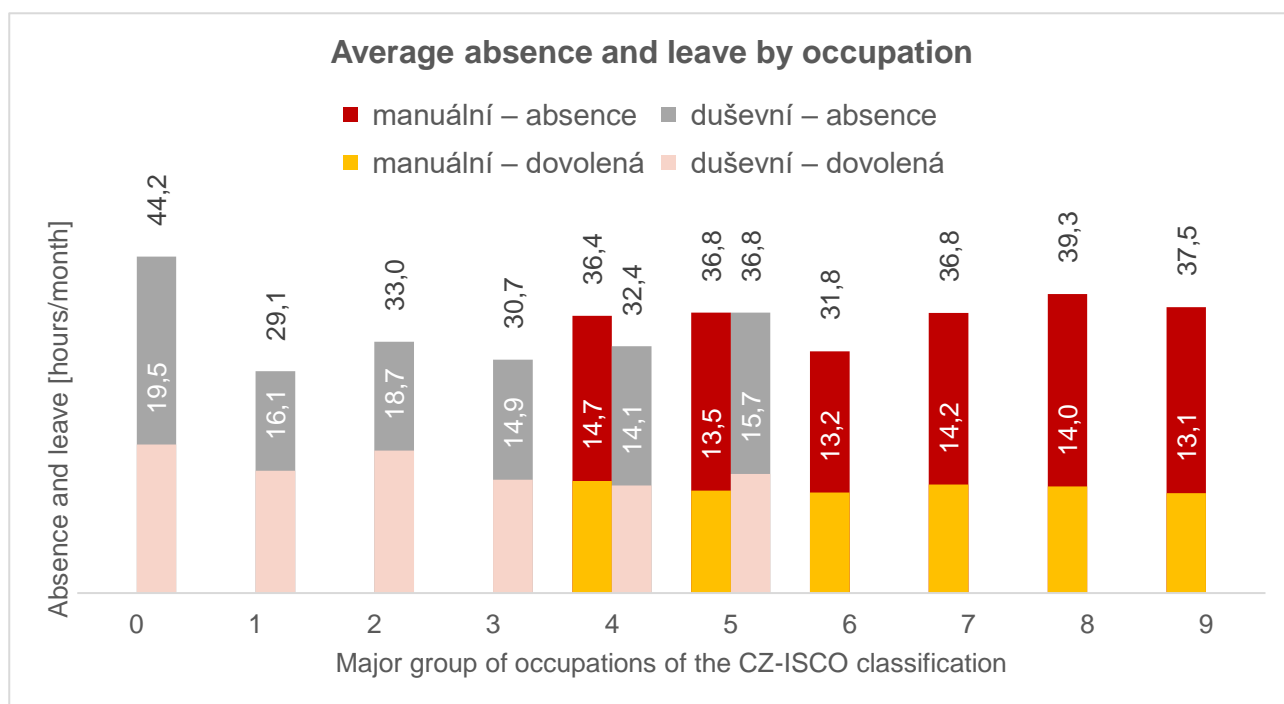
Note: The names of each major group of occupations of the CZ-ISCO classification are given in Table II in Annex 2.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked
manual – overtime

non-manual – hours worked
non-manual – overtime

Figure 30: Absence and leave of manual and non-manual workers by occupation according to the major groups of the CZ-ISCO classification in 2020



Note: The names of each major group of occupations of the CZ-ISCO classification are given in Table II in Annex 2.

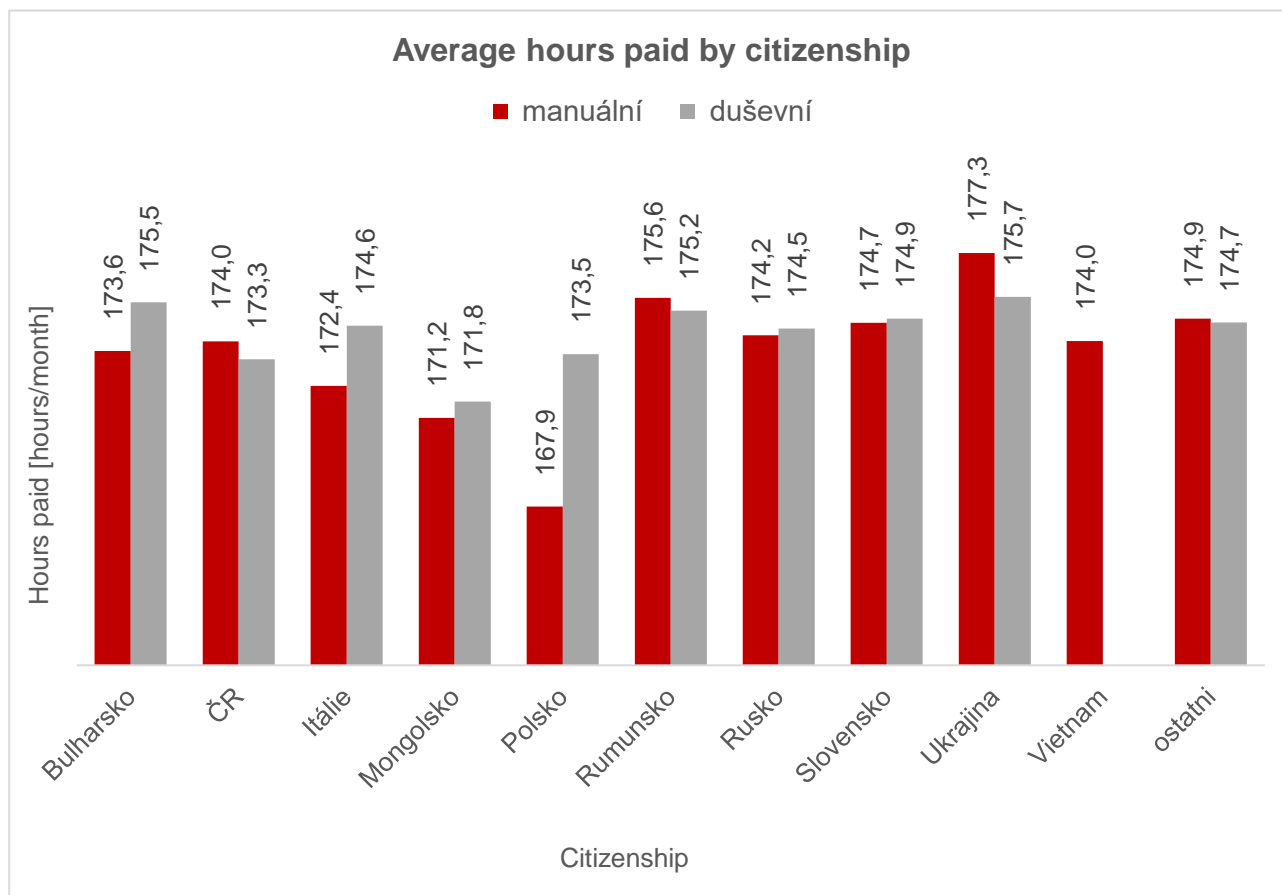
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – absence
manual – leave

non-manual – absence
non-manual – leave

The following Figure 31 shows the results according to **the most represented citizenships**. **The highest hours paid** are in **manual and non-manual** workers from **Ukraine** (177.3 hours per month for manual workers and 175.7 hours per month for non-manual workers). On the other hand, **manual workers from Poland** (167.9 hours per month) and **non-manual workers from Mongolia** (171.8 hours per month) have the **lowest** hours paid.

Figure 31: Hours paid of manual and non-manual workers by citizenship in 2020



Note: Data for non-manual workers with Vietnamese citizenship do not meet the publication criteria.

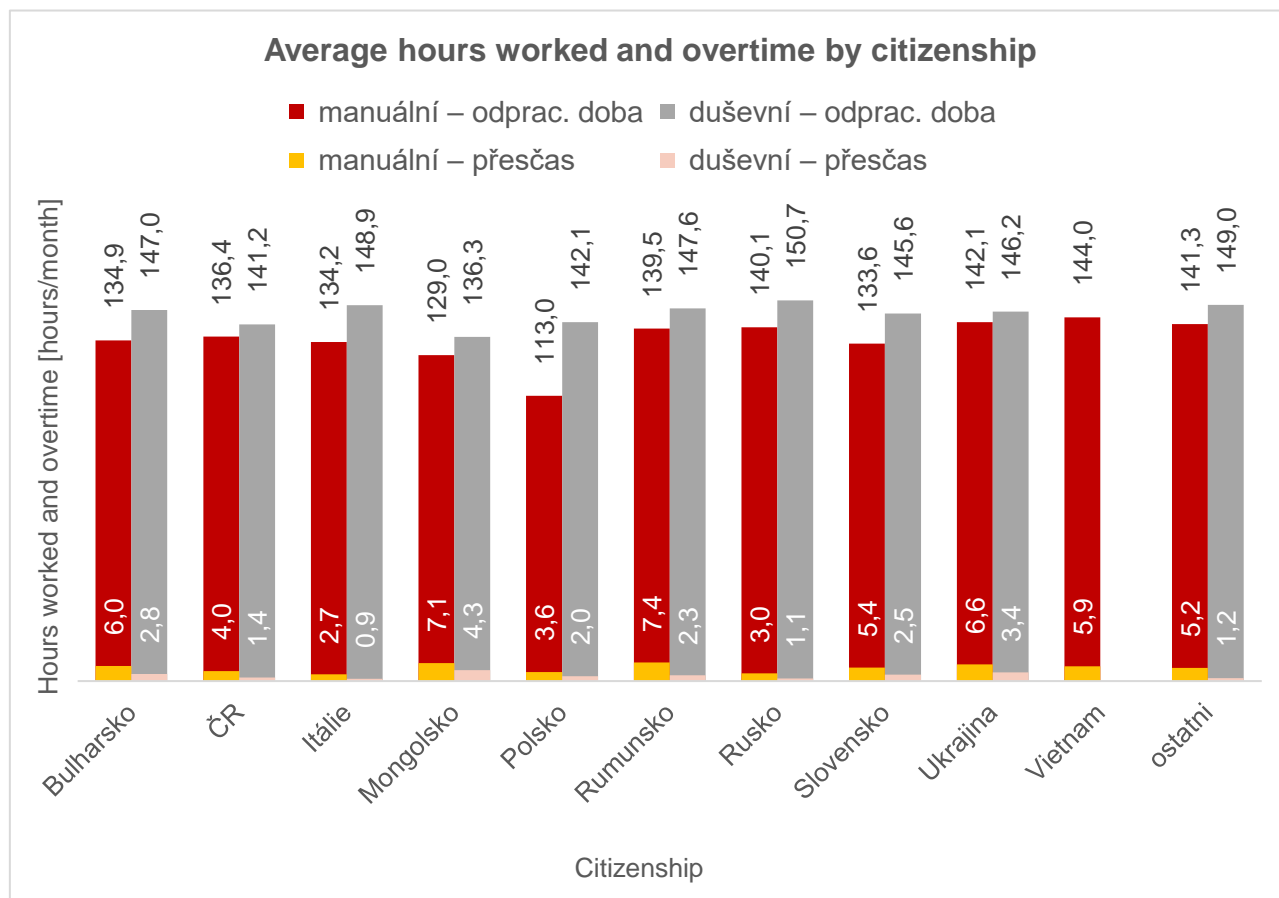
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual					non-manual					
Bulgaria	CR	Italy	Mongolia	Poland	Romania	Russia	Slovakia	Ukraine	Vietnam	other

Non-manual workers of all citizenships have **higher hours worked**; see Figure 32. It is highest among non-manual workers **from Russia** (150.7 hours per month). **Manual** workers have lower hours worked and the **lowest** average hours worked apply to employees from **Poland** (113 hours per month).

On the other hand, **manual** workers have **higher overtime**, with the highest being observed among employees **from Romania** (7.4 hours per month). The **non-manually** working **Italians** have the **lowest** overtime (0.9 hours per month).

Figure 32: Hours worked and overtime of manual and non-manual workers by citizenship in 2020



Note: Data for non-manual workers with Vietnamese citizenship do not meet the publication criteria.

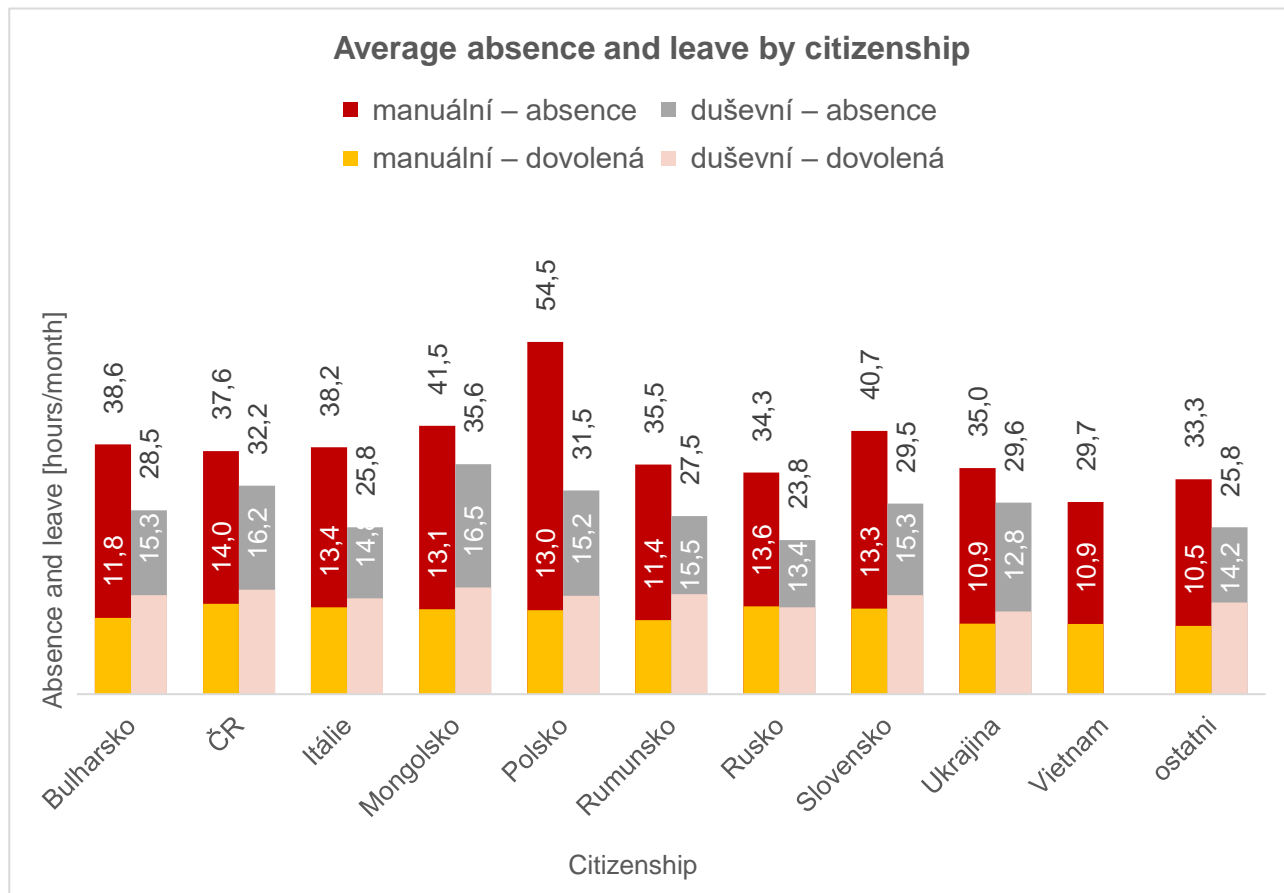
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked					non-manual – hours worked					
manual – overtime					non-manual – overtime					
Bulgaria	CR	Italy	Mongolia	Poland	Romania	Russia	Slovakia	Ukraine	Vietnam	other

Average absences and leave by citizenship are shown in Figure 33. We observe **the significantly highest absences** among **manually working Poles** (54.5 hours per month). **The lowest** absences then concern **non-manually working Russians** (23.8 hours per month).

The highest amount of leave is enjoyed by **non-manual** workers from **Mongolia** (16.5 hours per month) and the **lowest** leave is taken by **manually working Ukrainians and Vietnamese** (both 10.9 hours per month on average)

Figure 33: Absence and leave of manual and non-manual workers by citizenship in 2020



Note: Data for non-manual workers with Vietnamese citizenship do not meet the publication criteria.

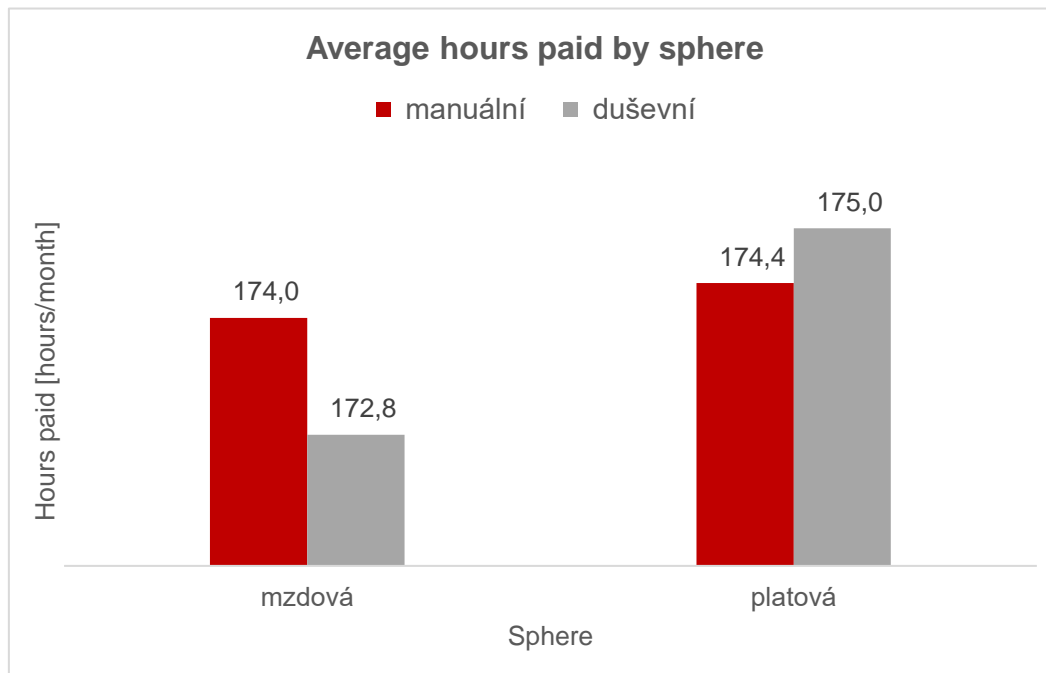
manual – absence	non-manual – absence
manual – leave	non-manual – leave
Bulgaria	CR
Italy	Mongolia
Poland	Romania
Russia	Slovakia
Ukraine	Vietnam
other	

Figure 34 focuses on the hours paid of manual and non-manual workers **by sphere**. **Non-manual** workers have clearly **lower hours paid** in the **wage** sphere (172.8 hours per month) and **manual** workers have lower hours paid in the **salary** sphere (174.4 hours per month).

Figure 35 deals with the hours worked and overtime by sphere. **Manual workers** in the **wage** sphere (136.2 hours per month) and **non-manual** workers in the salary sphere (136.7 hours per month) have **lower hours worked**.

Manual workers in the **wage** sphere have **high overtime** (4.3 hours per month). We observe the **lowest** overtime in the **wage sphere**, but in **non-manual** workers (1.4 hours per month on average).

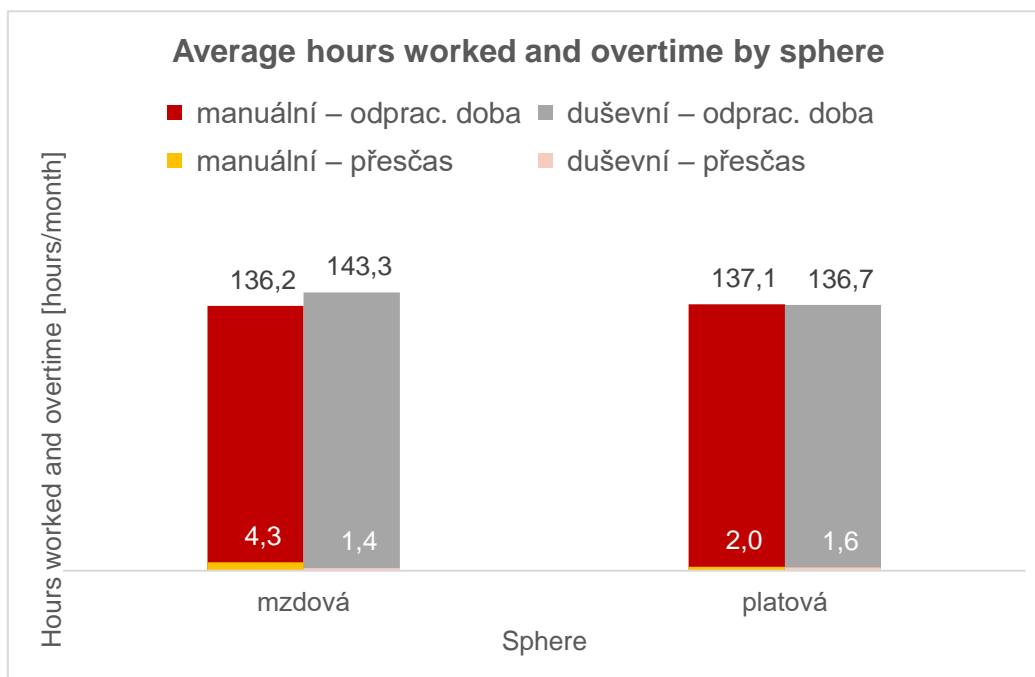
Figure 34: Hours paid of manual and non-manual workers by sphere in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual wage	non-manual salary
-------------	-------------------

Figure 35: Hours worked and overtime of manual and non-manual workers by sphere in 2020

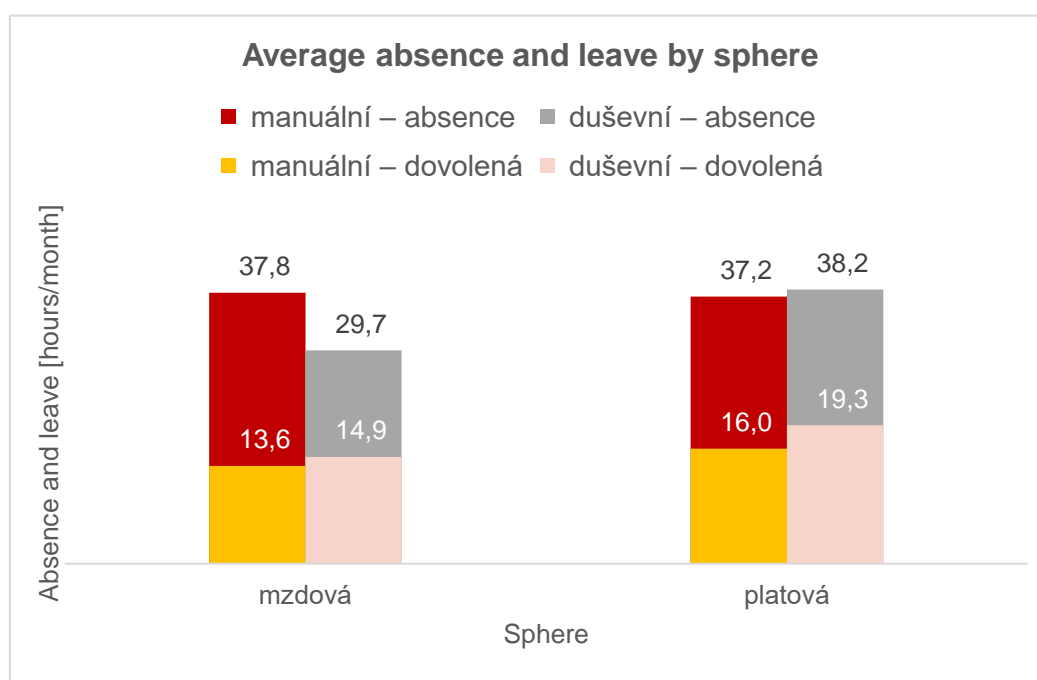


Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked manual – overtime wage	non-manual – hours worked non-manual – overtime salary
---	---

Figure 36 shows average absences and leave by sphere. In the **wage** sphere, **manual workers have a higher absence** (37.8 per month) than non-manual workers (29.7 hours per month). In the **salary** sphere, on the other hand, **non-manual workers have higher absences** (38.2 hours per month) than manual workers (37.2 hours per month). We observe the **highest amount of leave** in **non-manual** workers in the **salary** sphere (19.3 hours per month).

Figure 36: Absence and leave of manual and non-manual workers by sphere in 2020



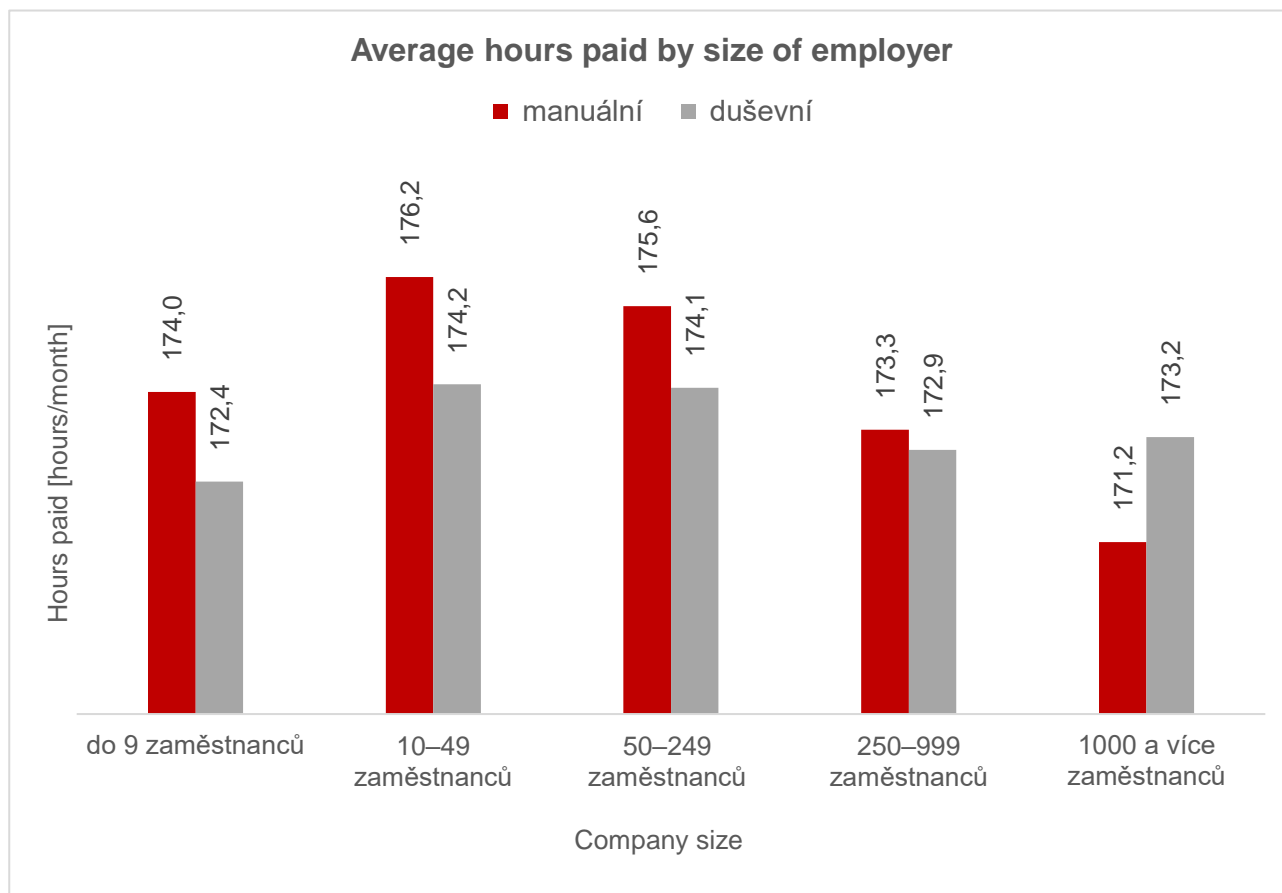
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – absence
manual – leave
wage

non-manual – absence
non-manual – leave
salary

Manual workers have **higher hours paid** than non-manual workers in all **size categories** of companies. The exception is the largest companies with 1,000 or more employees, where non-manual workers have higher hours paid (173.2 hours per month) than manual ones. Employees working in companies with **10–49 employees** have the **highest hours paid**, as shown in Figure 37. It is 175.6 hours for manual workers and 174.1 hours for non-manual jobs. **The lowest hours paid** are in **manual** workers in the size category of **1,000 or more employees** (171.2 hours per month) and **non-manual** workers in companies with **up to 9 employees** (172.4 hours per month).

Figure 37: Hours paid of manual and non-manual workers by size of employer in 2020



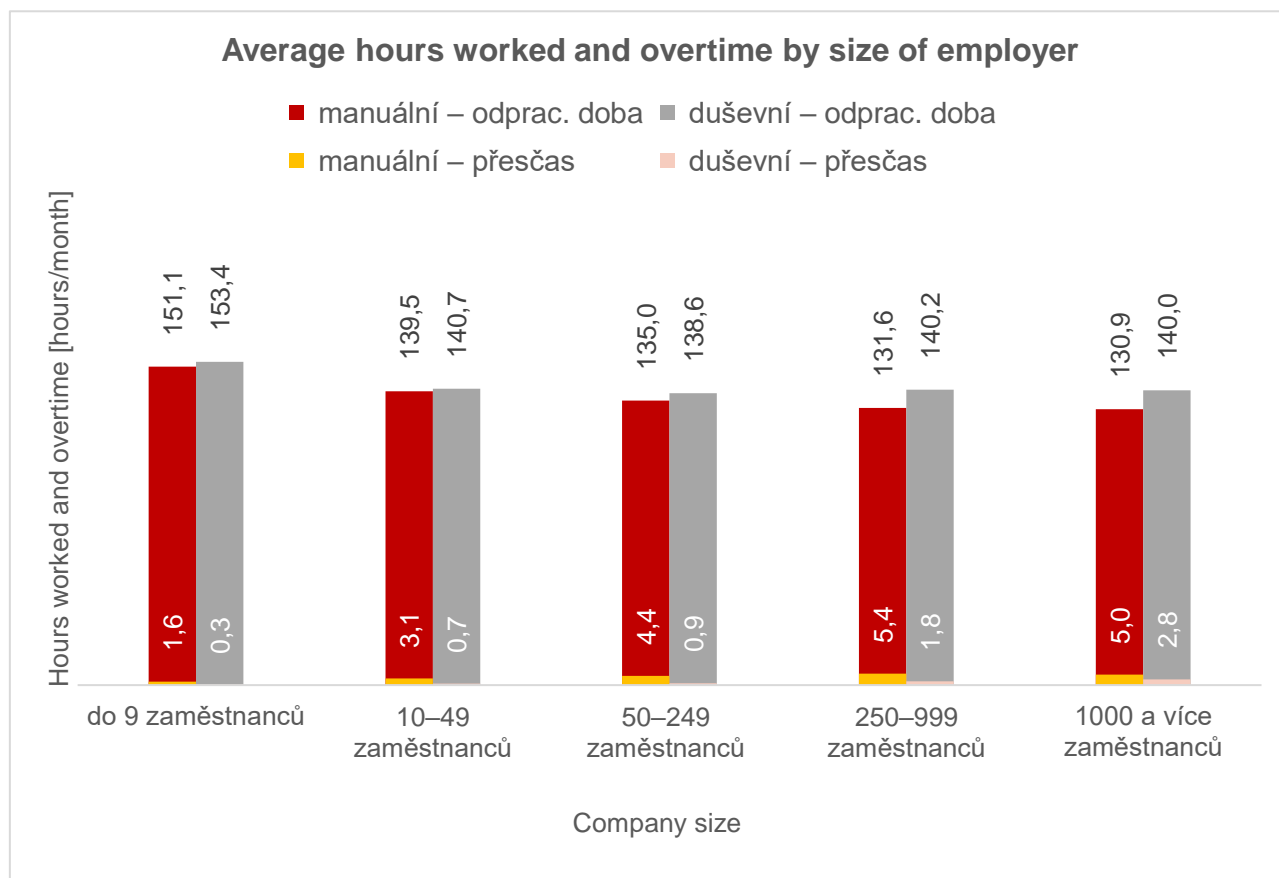
Source: ISPV (MLSA). Data valid as of 8 April 2021.

up to 9 employees 10–49 employees manual non-manual 50–249 employees 250–999 employees 1000 and more employees

Figure 38 summarizes hours worked and overtime according to the size of employer. In all size categories, non-manual workers have **higher hours worked** than manual workers and the highest is **in the category of up to 9 employees** (153.4 hours per month on average). **Manual** workers in the category of **1,000 or more** workers have the **lowest** hours worked (130.9 hours per month).

The highest overtime is reported by **manual** workers in the size category of **250 to 999 employees** (5.4 hours per month) and, conversely, the **lowest** in non-manual workers in the category of **up to 9 employees** (0.3 hours per month).

Figure 38: Hours worked and overtime of manual and non-manual workers by size of employer in 2020

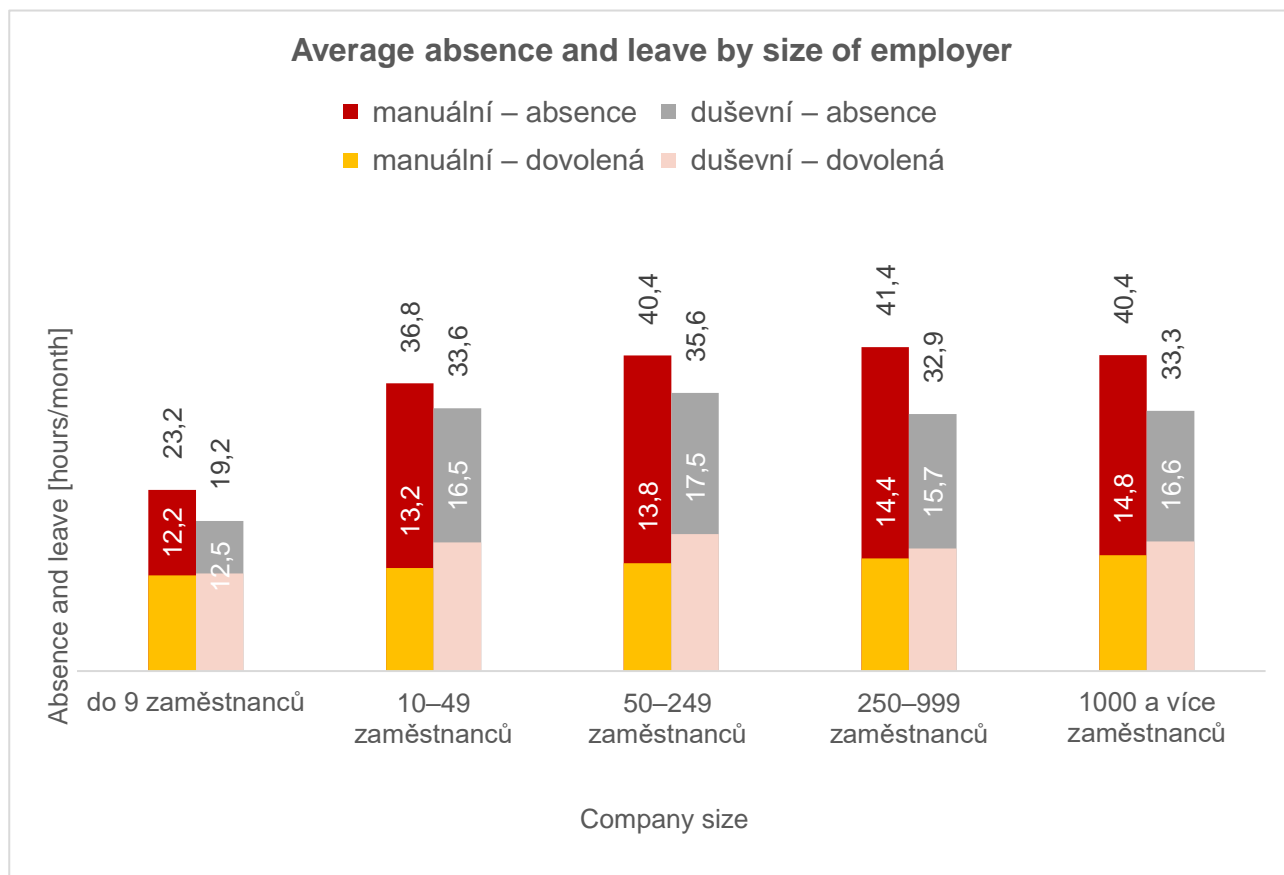


Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked	non-manual – hours worked
manual – overtime	non-manual – overtime
up to 9 employees	10–49 employees
50–249 employees	250–999 employees
1000 and more employees	

The average absences and leave **according to the size categories** of companies are shown in Figure 39. Manual workers have higher absences in all categories, but absences due to leave are lower than in non-manual workers. **The highest absences** are recorded by **manual** workers in the category of **250–999 employees** (41.4 hours per month). **Non-manual** employees have the **highest average leave** in companies with **50–250 employees** (17.5 hours per month).

Figure 39: Absence and leave of manual and non-manual workers by size of employer in 2020



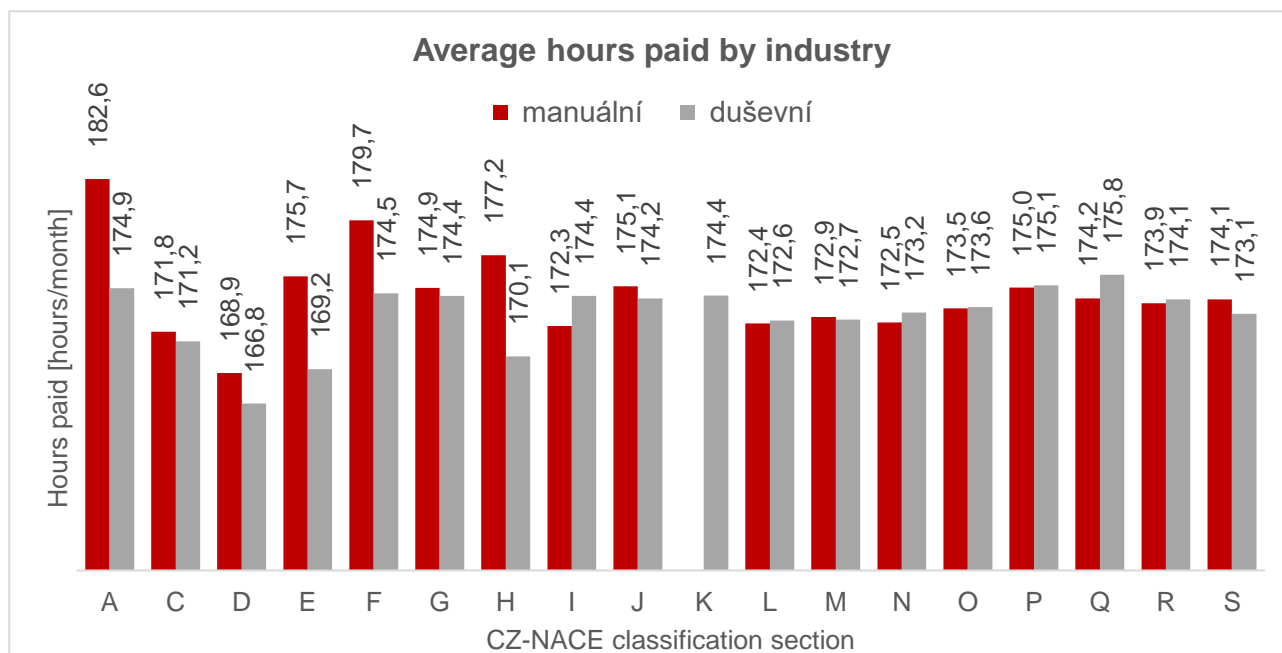
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – absence	non-manual – absence
manual – leave	non-manual – leave
up to 9 employees	1000 and more employees
10–49 employees	250–999 employees
50–249 employees	

Results in industries are compared in Figure 40. The highest average hours paid are for manual workers in section A of the CZ-NACE classification (**Agriculture, forestry, fishing** – 182.6 hours per month). We record the lowest hours paid for non-manual workers in section D (**Production and distribution of electricity, gas, heat and air conditioning** – 166.8 hours per month).

The average hours worked and overtime by industry are shown in Figure 41. The lowest hours worked are reported by non-manual workers in section I of the CZ-NACE classification (**Accommodation and food service activities** – 126.5 hours per month), which was mainly affected by measures against the spread of the coronavirus pandemic in 2020. The highest number of hours worked was by manual workers in section A – **Agriculture, forestry and fishing** (152.5 hours per month), who also show the highest overtime (8.6 hours per month). The lowest average overtime is reported by non-manual workers in section P – **Education** (0.1 hours per month).

Figure 40: Hours paid of manual and non-manual workers by industry of the CZ-NACE classification section in 2020

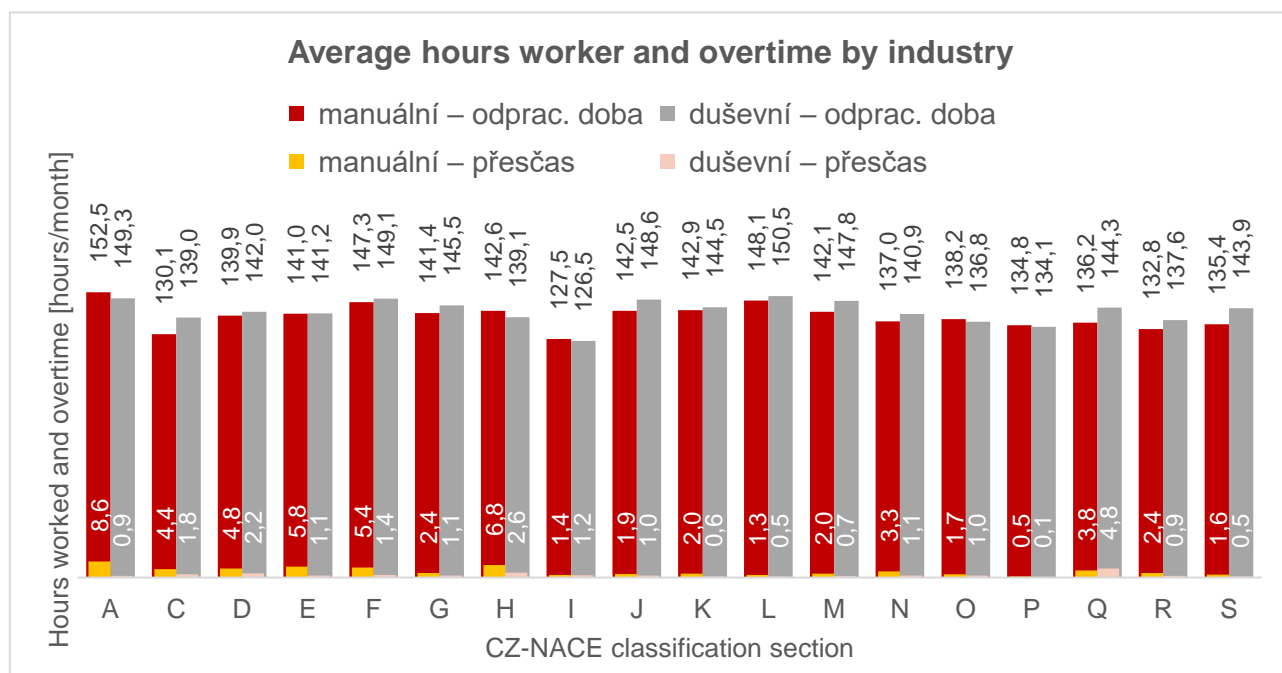


Note: Data for section B and manual workers in section K do not meet the publication criteria.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual	non-manual
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Figure 41: Hours worked and overtime of manual and non-manual workers by industry of the CZ-NACE classification section in 2020



Note: Data for employees in section B of the CZ-NACE classification do not meet the publication criteria.

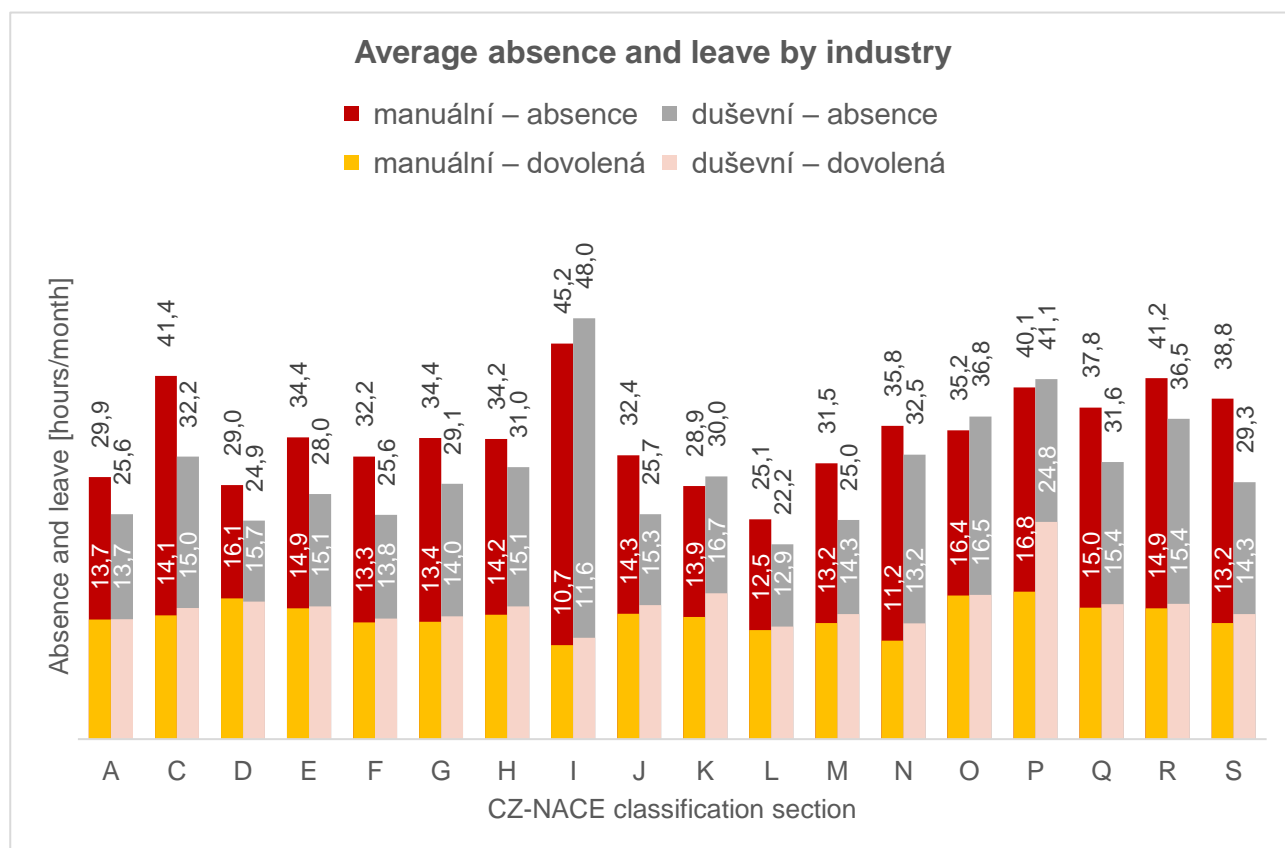
Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked	non-manual – hours worked
manual – overtime	non-manual – overtime

Figure 42 compares average absences and leave by industry. **The highest absences** can be observed due to the pandemic in 2020 in **manual and non-manual workers** in section I – **Accommodation and food service activities** (45.2 hours in manual and 48 hours in non-manual workers). **Non-manual workers** have the **lowest absences** in section L – **Real estate activities** (22.2 hours per month). Employees in section P – **Education** have the **highest** absences due to **leave** (16.8 hours for manual workers and 24.8 hours for non-manual workers). Employees from section O – Public administration and defence; compulsory social security (16.4 hours for manual workers and 16.5 for non-manual workers) placed second in terms of the hours of leave.

Employees who work in domestic-owned companies have higher average hours paid compared to foreign-owned companies, as shown in Figure 43. The **highest** average **hours paid** are in **manual workers** in **domestic-owned** companies (175.1 hours per month) and the **lowest** in **manual workers** in **foreign-owned** companies (171.7 hours per month).

Figure 42: Absence and leave of manual and non-manual workers by industry of the CZ-NACE classification section in 2020



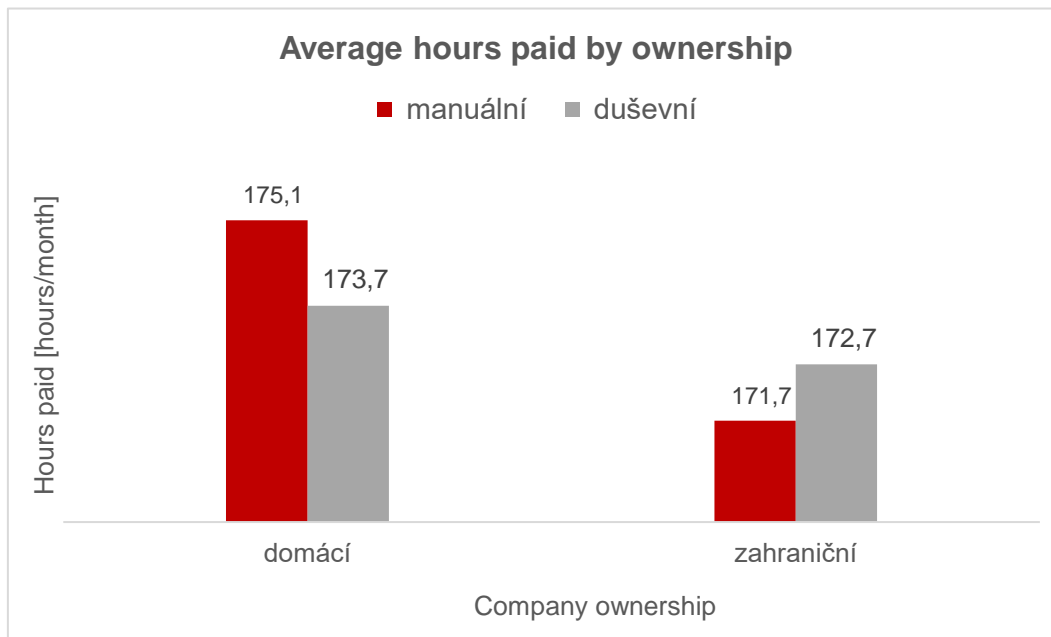
Note: Data for employees in section B of the CZ-NACE classification do not meet the publication criteria.

Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – absence
manual – leave

non-manual – absence
non-manual – leave

Figure 43: Hours paid of manual and non-manual workers by business ownership in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

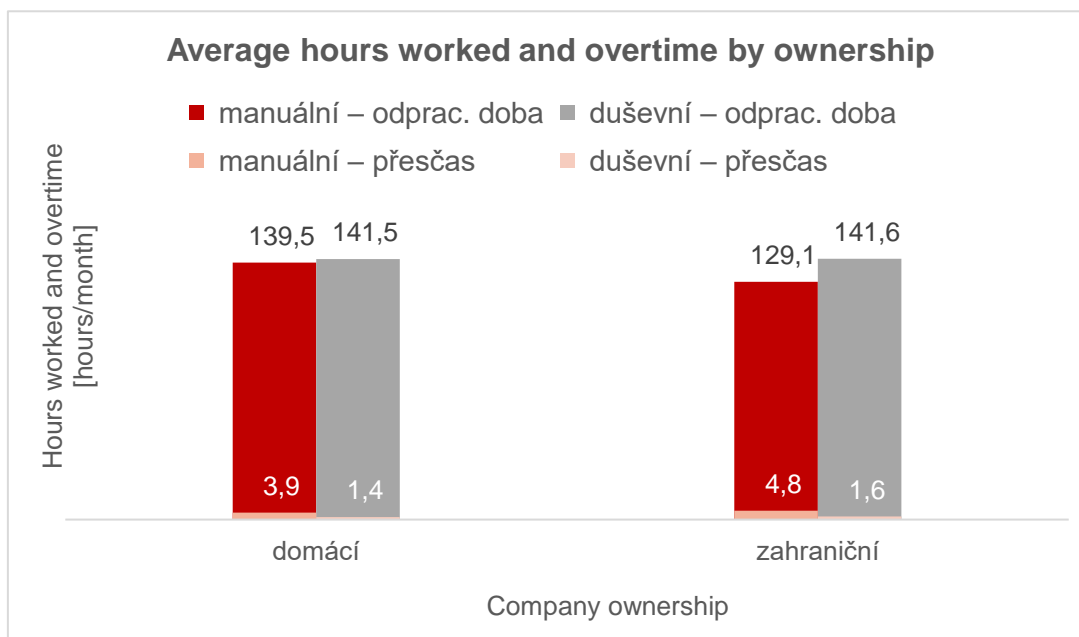
manual domestic	non-manual foreign
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Figure 44 shows that the **highest hours worked** are in non-manual workers in **foreign-owned** companies (141.6 hours per month) and, conversely, the **lowest** average hours worked in **manual** workers in **foreign-owned** companies (129 hours per month).

In terms of **overtime**, **manual** workers in **foreign-owned** companies work more overtime (4.8 hours) than in domestic ownership. **Non-manual** workers have the **lowest** overtime in **domestic-owned** companies (1.4 hours per month).

According to Figure 45, **manual** workers have **higher total absences** in **foreign-owned** companies (42.6 hours per month) compared to employees in domestic-owned companies. In terms of absence due to **leave**, the **highest** average leave can be observed in **non-manual workers** in **domestic-owned** companies (16.2 hours per month).

Figure 44: Hours worked and overtime of manual and non-manual workers by business ownership in 2020

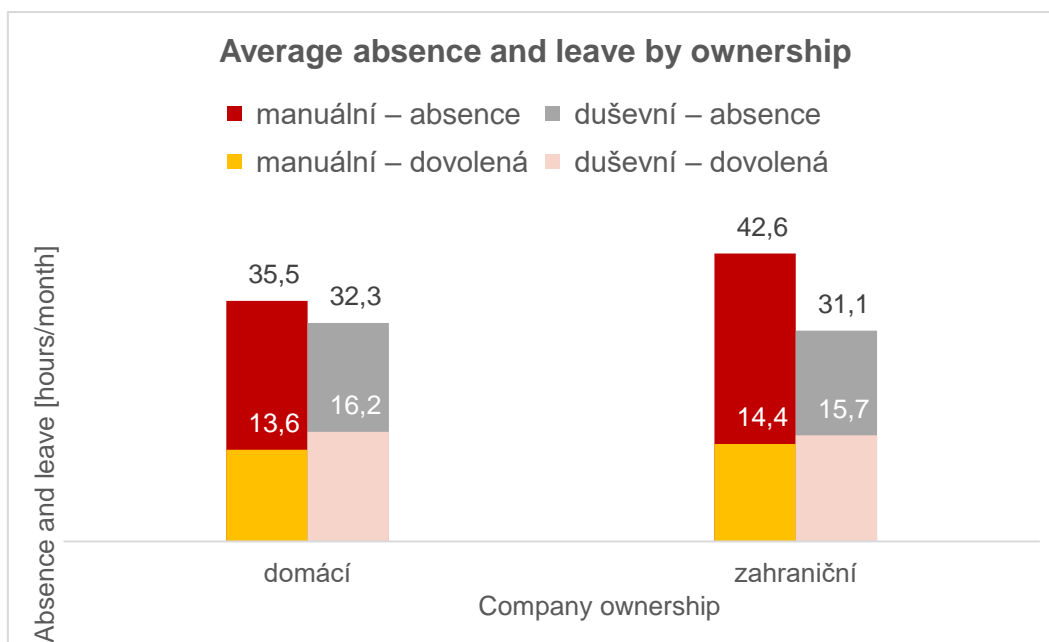


Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – hours worked
manual – overtime
domestic

non-manual – hours worked
non-manual – overtime
foreign

Figure 45: Absence and leave of manual and non-manual workers by business ownership in 2020



Source: ISPV (MLSA). Data valid as of 8 April 2021.

manual – absence
manual – leave
domestic

non-manual – absence
non-manual – leave
foreign

2 Differences in threats in the labour market in an international comparison

Several trends are currently resonating in labour markets around the world that **affect the working conditions** of employees. These are mainly **changes in the field of digitalization and robotics** and also the **impact of the coronavirus pandemic** in the last year. **Collective bargaining**, which in this context aims to **ensure the social protection of employees and prevent discrimination in the labour markets**, must respond to all trends. For these reasons, the following chapter will address the differences in the working conditions of employees, especially in hours worked and wages in the European context. Furthermore, the chapter will focus on changes in the demand for skills, paying attention to changes in employment rate or qualifications of employees. The next part is devoted to the development in trade union involvement with a focus on specific areas or groups of employees so that the development between manual and non-manual jobs can be evaluated. Part of the chapter is devoted to the findings of international institutions on the development of labour markets during the coronavirus pandemic.

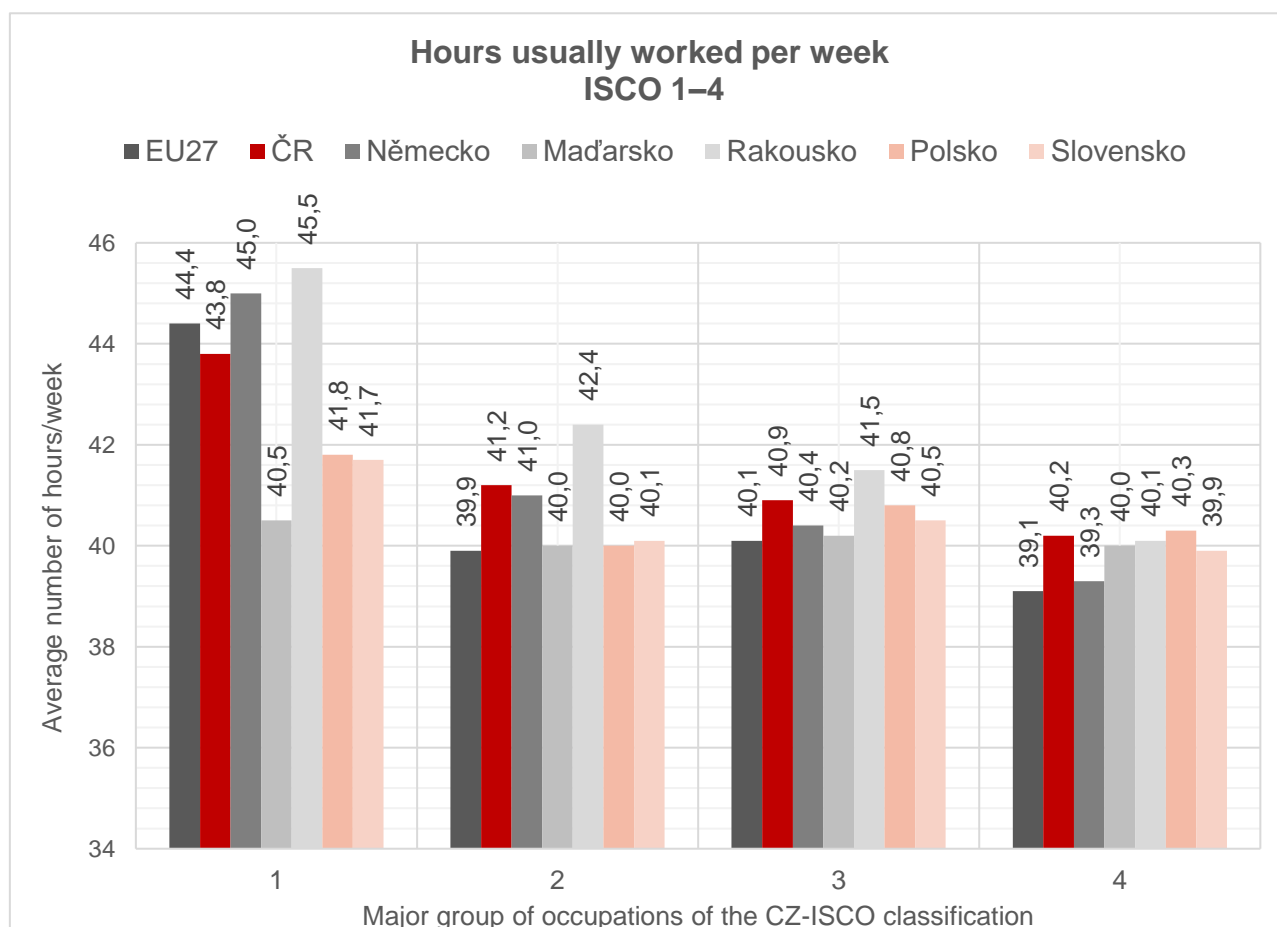
2.1 Working conditions

In the international context, differences in working hours and remuneration vary from country to country. However, within specific groups of employees, similar characteristics in terms of working conditions can be observed across countries. The International Labour Organization (ILO), in cooperation with Eurofound (2019)³, conducted surveys in the EU-28, the USA, Turkey, South Korea and Uruguay. Their results point to differences between jobs and clearly confirm that **workers in manual jobs** are exposed to **very demanding working conditions** in all the countries studied compared to other jobs.

Figure 46 shows **the differences in hours worked** in selected EU countries **by occupation in major groups 1–4 according to the International Standard Classification of Occupations ISCO-08**. **Employees in Austria have the highest hours worked** from all monitored job groups. **The Czech Republic is above the EU average**, with the exception of major group 1 (legislators and managers), where the hours worked are 43.8 hours per week. The EU average is 44.4 hours per week in this group of employees.

³ Eurofound and International Labour Organization (2019), *Working conditions in a global perspective*, Publications Office of the European Union, Luxembourg, and International Labour Organization, Geneva. Available from: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_696174.pdf.

Figure 46: Average number of hours usually worked per week by major groups of occupations of the ISCO-08 classification in selected EU countries in 2020



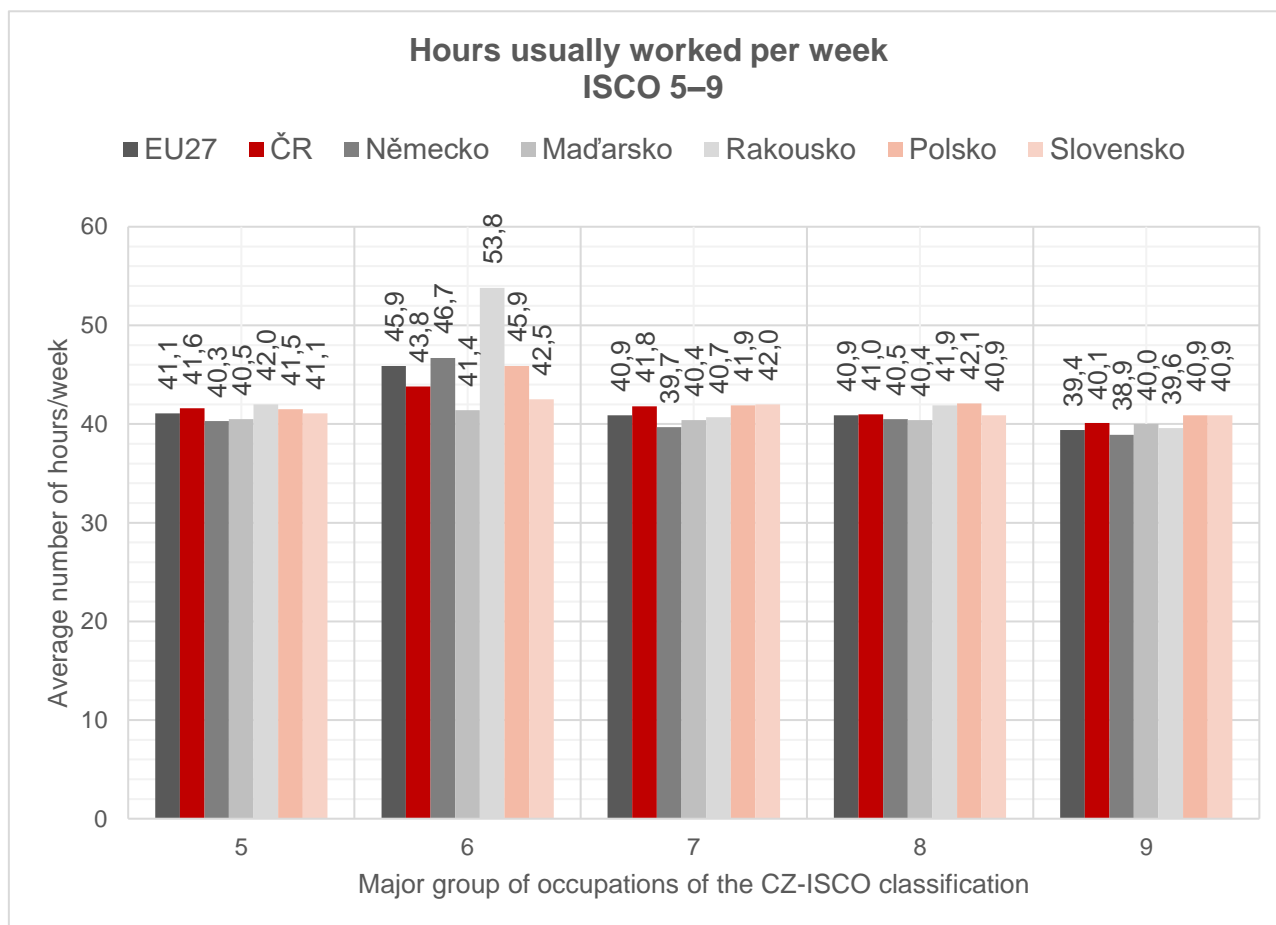
Note: The names of the major groups of the ISCO classification are part of Table II in Annex 2.

Source: EUROSTAT (2020). Data valid as of 17 May 2021.

EU27	CR	Germany	Hungary	Austria	Poland	Slovakia
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Figure 47 shows the average number of hours usually worked per week in **ISCO-08 major groups 5–9**. In these groups, the **hours worked by Czech workers are again above the EU average**, with the exception of major group 6 (skilled agricultural, forestry and fishery workers).

Figure 47: Average number of hours usually worked per week by major groups of occupations of the ISCO-08 classification in selected EU countries in 2020



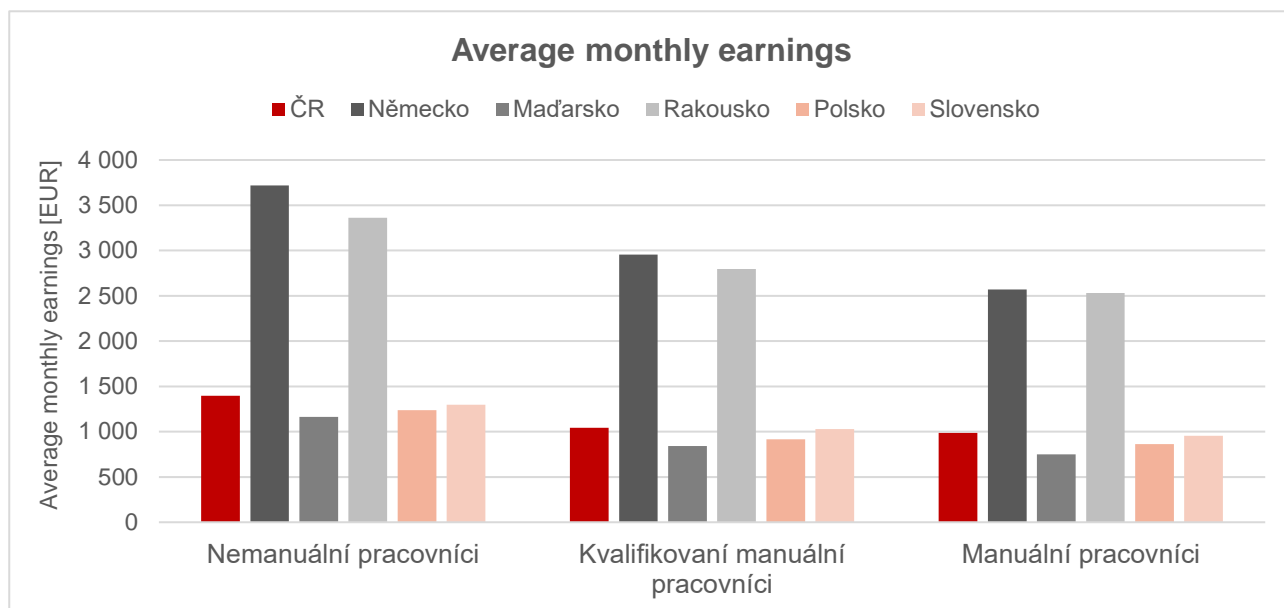
Note: The names of the major groups of the ISCO classification are part of Table II in Annex 2.

Source: EUROSTAT (2020). Data valid as of 17 May 2021.

EU27	CR	Germany	Hungary	Austria	Poland	Slovakia
------	----	---------	---------	---------	--------	----------

Figure 48 shows the **differences in wages** of employees in selected EU countries by occupation. Compared to other jobs, **non-manual workers** have **higher earnings** in all countries surveyed. Workers in **Germany and Austria** have the **highest** earnings. Chapter 3 in this study deals with the differences in hours worked and wages of manual and non-manual workers according to the impact of the existence of a collective agreement within the Czech Republic.

Figure 48: Differences in average monthly earnings of employees by type of job in selected EU countries in 2020



Note: According to EUROSTAT, non-manual workers are employees in major groups of occupations 1–5 according to the ISCO-08 classification, skilled manual workers belong to groups 6–8 and manual workers to groups 7–9. The names of major groups of the ISCO classification are part of Table II in Annex 2. Data are for industry, construction and services (excluding public administration, defence and compulsory social security).

Source: EUROSTAT (2020). Data valid as of 17 May 2021.

CR	Germany	Hungary	Austria	Poland	Slovakia
Non-manual works			Skilled manual works		Manual workers

2.2 Changes in the demand for skills

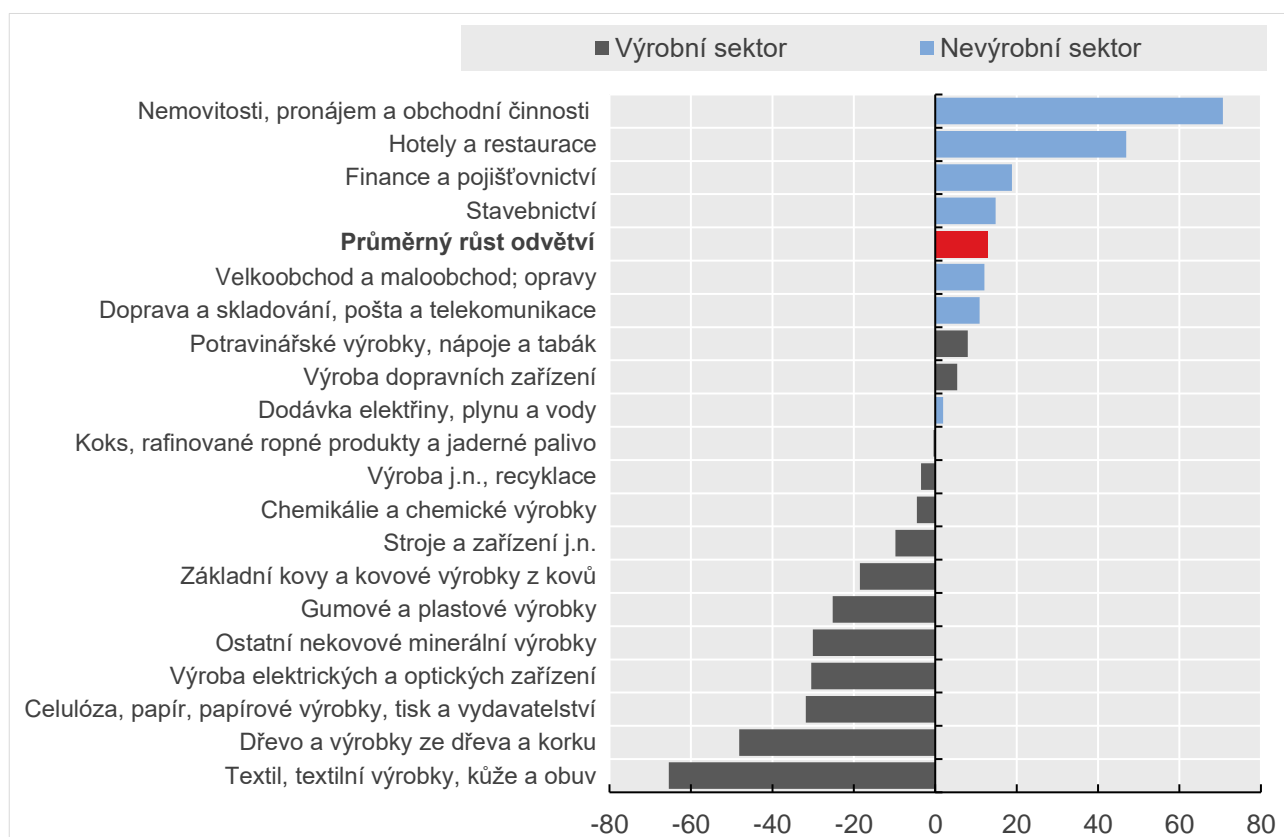
In connection with the changing needs of labour markets, the **number of workers in the services industry is generally expected to increase** at all stages of economic development, while the share of **employment rate in agriculture will continue in a long-term downward trend** (ILO, 2019⁴). Agriculture now accounts for almost 70% of all jobs in developing countries, 40% in lower-middle-income countries, 16% in upper-middle-income countries and only 3% in developed countries. The share of employment rate in manufacturing industry will continue to decline, especially in upper- and middle-income countries and in developed countries, while growth in lower- and middle-income countries will increase, but only slightly. Deindustrialization has long been a problem in developed countries. The result is a loss of quality jobs, a decline in the number of unions and a growing

⁴ International Labour Organization (2019), *Trade Unions in the Balance*, International Labour Organization, Geneva. Available from: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_722482.pdf.

polarization in the labour market. According to the ILO, more people will accumulate in low-paid, low-productivity jobs with fewer jobs in industry in developing countries.

While **total employment rate in the world** continues to **grow**, individual areas of the economy are facing significant structural changes. As a result of the changes, **entire sectors of the economy have shrunk**, causing a large number of jobs to decrease. An OECD study (2019)⁵ documenting employment trends in sectors of the economy shows that **new jobs were created mainly in the services industry** over the last two decades, while they **generally declined in manufacturing industries** (Figure 49). This trend has contributed to increasing disparities between different groups of workers and is partly responsible for the polarization of the labour market.

Figure 49: Percentage change in total employment in industry in selected OECD countries from 1995 to 2015



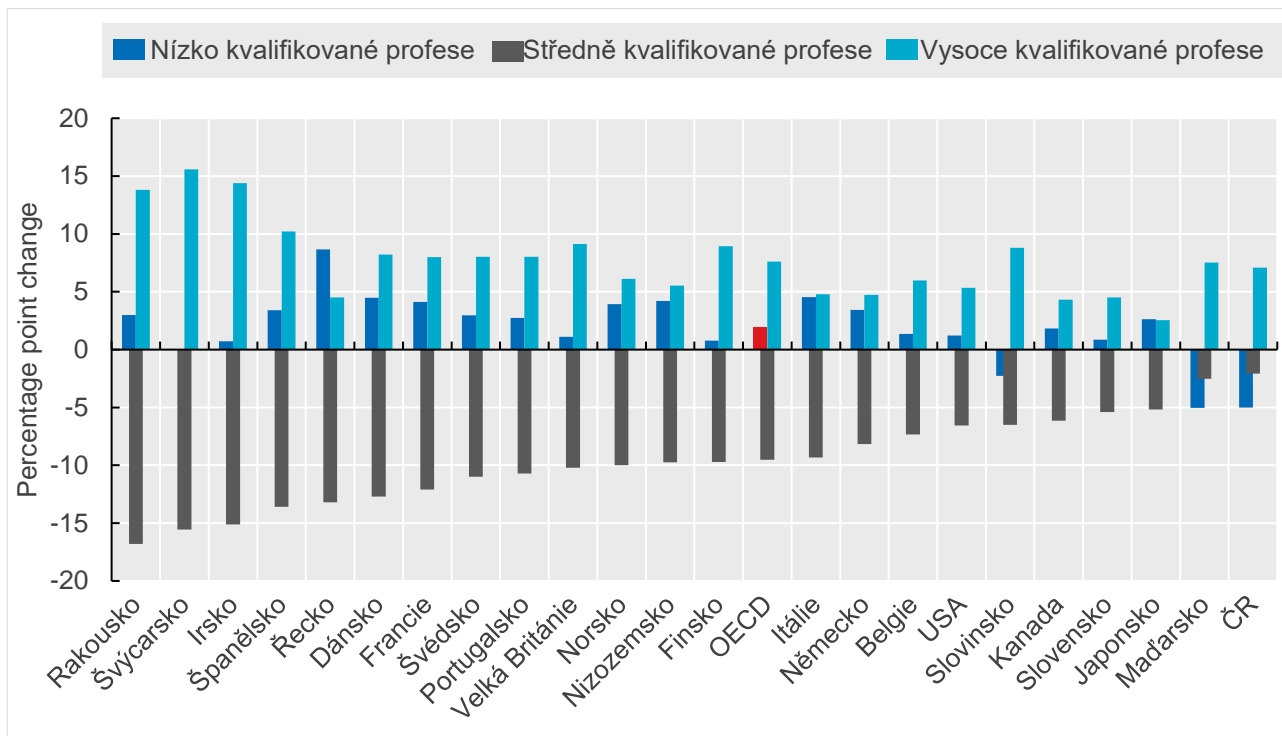
Source: Taken from OECD, 2019 (Employment Outlook 2019: *The future of work*).

Manufacturing Non-manufacturing
Real estate, renting and business activities; Hotels and restaurants; Finance and insurance; Construction; Average industry growth; Wholesale and retail trade; repairs; Transport and storage, post and telecommunication; Food products, beverages and tobacco; Transport equipment manufacturing; Electricity, gas and water supply; Coke, refined petroleum products and nuclear fuel; Manufacturing n.e.c; recycling; Chemicals and chemical products; Machinery and equipment n.e.c; basic metals and fabricated metal products; Rubber and plastics products; Other non-metallic mineral products; Electrical and optical equipment manufacturing; Pulp, paper, paper products, printing and publishing; Wood and products of wood and cork; Textiles, textile products, leather and footwear

According to the OECD (2019)⁶, other changes taking place in labour markets in advanced economies include **polarization of labour**. The **share of medium-skilled jobs has declined** in recent decades, while the share of workers in **high- and low-skilled occupations** has **increased** in most countries. These changes have led to an increase in employment rate in the high-skilled jobs in almost all the countries analysed (Figure 50). The publication also describes the factors that led to this deepening of the polarization of work. The already mentioned **decline in employment in the manufacturing industry** had a partial effect. But polarization is largely due to the **decline in medium-skilled jobs** in the industry. **Technological changes and globalization** are behind this, as medium-skilled jobs are most affected by automation and the relocation of production between countries. These jobs are often very routine in nature, making them relatively easy to perform with a machine or a worker abroad. If we look at the development in the **Czech Republic and Hungary**, we find that they are the only ones of the analysed countries where **there is a decrease in the share of employment in medium-skilled jobs (the least) and also a decrease in the share of employment in low-skilled jobs**. It suggests that not only the workers in the CZ-ISCO groups 4 – officials, 7 – craft and related trades workers and 8 – plant and machine operators and assemblers, but also service and sales workers and elementary occupations (CZ-ISCO major groups 5 and 9) are affected by changes in the Czech Republic.

⁶ OECD (2019), *OECD Employment Outlook 2019: The future of work*, OECD Publishing, Paris. Available from: <https://doi.org/10.1787/9ee00155-en>.

Figure 50: Change in the percentage point of the share of total employment from 1995 to 2015



Note: High-skilled jobs include jobs classified in CZ-ISCO major groups 1, 2 and 3, medium-skilled jobs belong to major groups 4, 7 and 8 and low-skilled jobs belong to major groups 5 and 9. The names of major groups of the CZ-ISCO classification are part of Table II in Annex 2.

Source: Taken from OECD, 2019 (Employment Outlook 2019: *The future of work*).

Low skill	Middle skill	High skill
Austria; Switzerland; Ireland; Spain; Greece; Denmark; France; Sweden; Portugal; Great Britain; Norway; Netherlands; Finland; OECD; Italy; Germany; Belgium; USA; Slovenia; Canada; Slovakia; Japan; Hungary; CR		

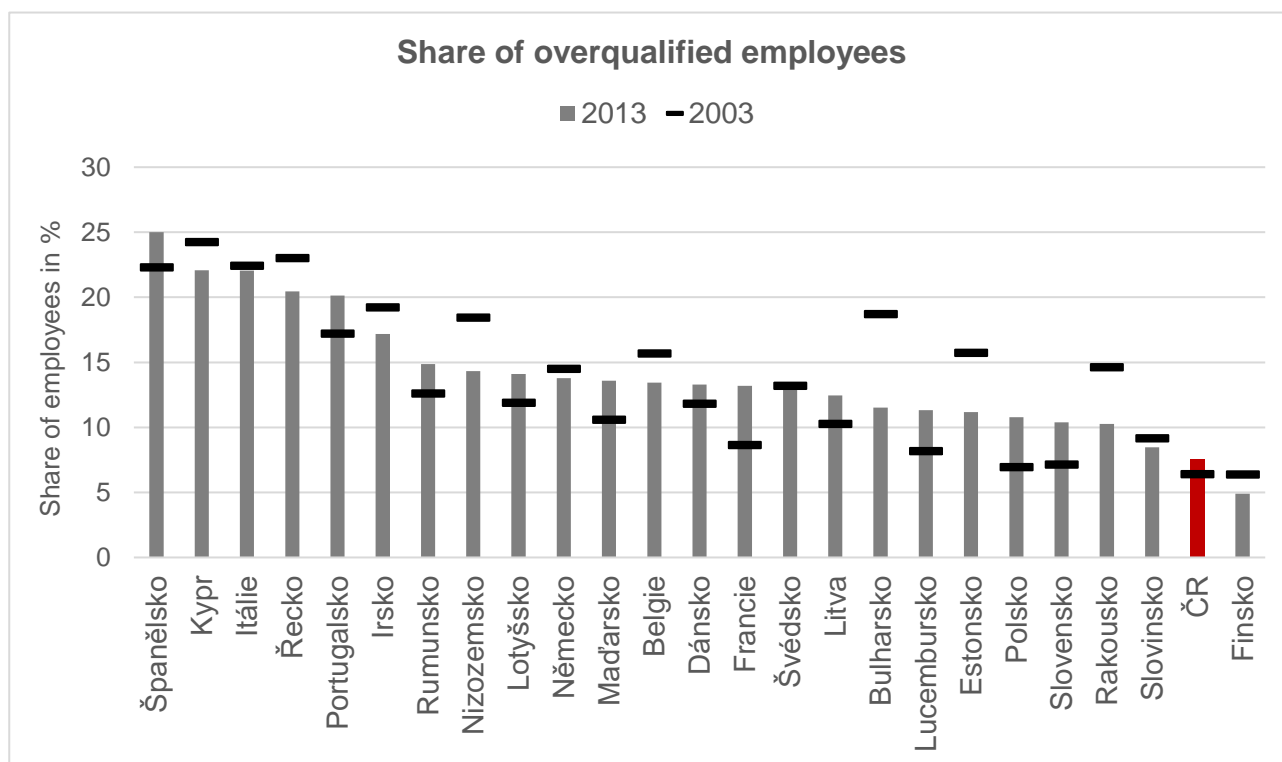
However, rising or falling employment numbers do not reflect all aspects of the changing labour market. Jobs **change** in terms of their **content, skill requirements, responsibilities, independence** or level of **teamwork**. Certain jobs are becoming redundant due to technological progress. Digitalization, robotics and artificial intelligence **reduce** the demand for **craft and related trades workers, plant and machine operators and assemblers or office workers**. According to the Ministry of Industry and Trade (2019)⁷, data on employment rate from 1998 to 2014 show a worldwide decline in these jobs, both in developed and developing countries. **Demand for managers, professionals and technicians is growing**, especially in developed and upper-middle-income countries. In general, the demand for **service and sales** workers is growing in all countries, and for **auxiliary and unskilled labour** in developing and lower-middle-income countries. It is assumed that the process of digitalization and robotics replace work, especially where

⁷ International Labour Organization (2019), *Trade Unions in the Balance*, International Labour Organization, Geneva. Available from: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_722482.pdf.

machines and algorithms are able to replace tasks previously performed by humans. Which are, as already mentioned, manual workers (e.g. machine operators in production), but also some non-manual workers (e.g. administrative work in a bank).

The level of education of employees adapts over time to changing skill requirements in individual jobs, which can be a problem in some economies. Figure 51 shows a change in the development of the share of employees with a higher level of education than is required for the job performed (overqualification) in EU countries with available data in 2003 and 2013. The **Czech Republic** is one of the countries with **the lowest share of overqualified employees**, although this share increased slightly in the observed period of ten years (from 6.4% to 7.6%). Other countries that do not face a high proportion of overqualified workers include Finland, Slovenia, Austria, Slovakia and Poland. We observe a high proportion of overqualified employees with higher education than required for the job performed in Spain, Cyprus, Italy, Greece or Portugal.

Figure 51: Proportion of overqualified employees in job performed in EU countries with available data in 2003 and 2013

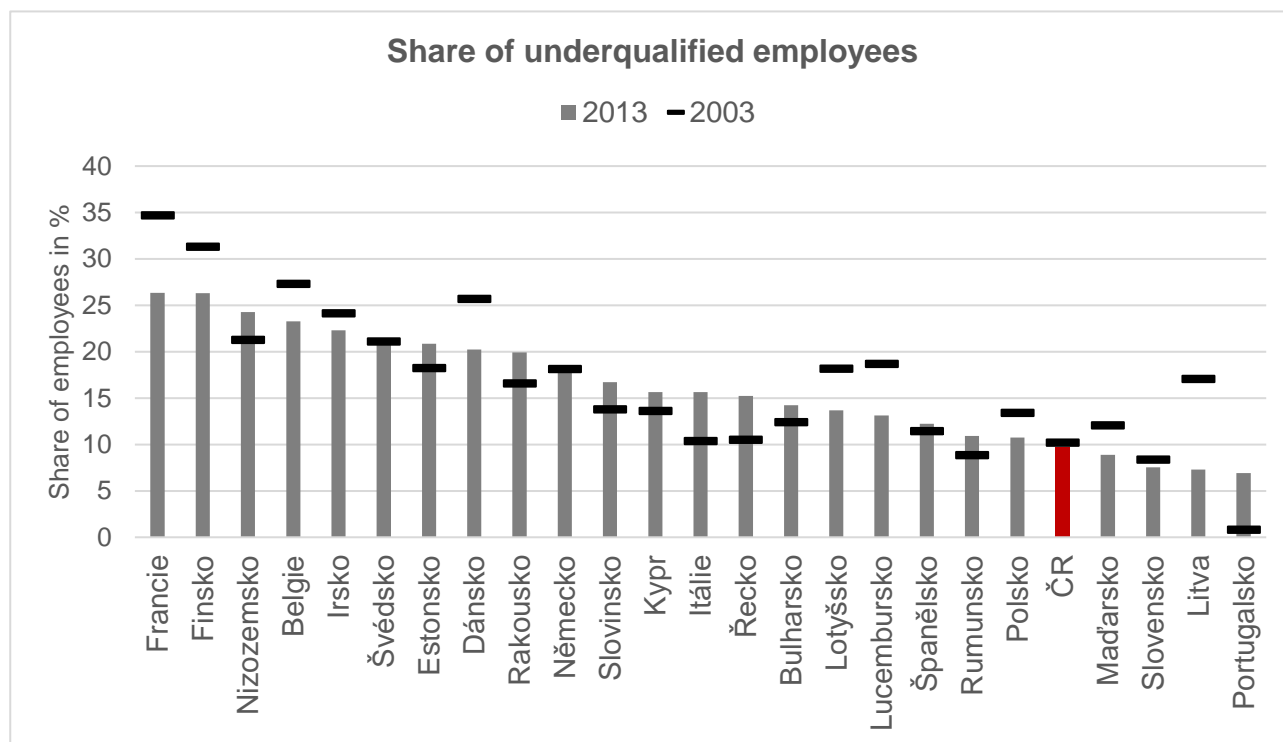


Source: OECD (World Indicators of Skills for Employment). Data valid as of 17 May 2021.

Spain; Cyprus; Italy; Greece; Portugal; Ireland; Romania; Netherlands; Latvia; Germany; Hungary; Belgium; Denmark; France; Sweden; Lithuania; Bulgaria; Luxembourg; Estonia; Poland; Slovakia; Austria; Slovenia; CR; Finland

Figure 52 shows the share of underqualified employees. That is, employees with a lower level of education than required for their job in 2003 and 2013 in EU countries. The **Czech Republic** is one of the countries with a **lower share of underqualified employees** and this share has decreased slightly from 10.2% to 9.7% since 2003. Other countries with a low share of underqualified workers are Portugal, Lithuania, Slovakia, Hungary or Poland. Countries with a high proportion of underqualified workers include France, Finland, the Netherlands, Belgium and Ireland.

Figure 52: Proportion of underqualified employees in job performed in EU countries with available data in 2003 and 2013



Source: OECD (World Indicators of Skills for Employment). Data valid as of 17 May 2021.

France; Finland; Netherlands; Belgium; Ireland; Sweden; Estonia; Denmark; Austria; Germany; Slovenia; Cyprus; Italy; Greece; Bulgaria; Latvia; Luxembourg; Spain; Romania; Poland; CR; Hungary; Slovakia; Lithuania; Portugal

2.3 Trade union involvement

According to the OECD (2019)⁸, collective bargaining and social dialogue can help address the challenges posed by a changing world of labour. In times of demographic and technological change, collective bargaining can allow employers to flexibly adjust wages, working hours, work organization and tasks to new needs. It can help shape new workers' rights, adapt existing rules, regulate the use of new technologies, provide active support to workers moving to new jobs and anticipate skills needs. Nevertheless, **the number of workers who are members of unions and covered by collective agreements is declining in many countries**. Social protection systems play a key stabilizing role, especially in the current situation of higher uncertainty about the pace and extent of changes in the labour market. It was described above in the chapter that changes in the labour market affect the loss of jobs, especially in some areas or industries, thus increasing the need for social protection of employees.

In his study, Vissers (2019)⁹ states that 516 million (17%) of the three billion people employed are union members. Excluding Chinese trade unions (and trade unions in Belarus and Cuba), total world trade union membership is 214 million and trade union involvement is about 10%. Excluding the self-employed persons, family workers and employers, the global trade union involvement rate is 27%. According to the results of this study, it can be said that **digitalization has an impact on jobs in which workers are highly unionized**. Which is one of the reasons for the decline in total trade union involvement. The trade union involvement of craft and related trades workers, machine operators and assemblers was higher than among other occupational groups in Australia and the United States in the early 1920s, and second only to technicians and professionals in Canada, Ireland and the United Kingdom. The change in the structure of jobs will therefore have a clear negative impact on the extent of trade union membership. In contrast, for example, the gap between the trade union involvement of skilled and unskilled workers is less pronounced in Sweden and the Netherlands, so the decline in the union membership base has been smaller due to technological change. According to the study, the level of trade union involvement of craft and related trades workers, machine operators and assemblers has recently decreased in the countries analysed, namely: from 45% in 2000 to 33% in 2008 in Ireland, from 39 to 35% in the same period in Canada, from 35 to 28% in 2012 in Australia, from 34 to 24% in 2016 in the United Kingdom and from 20 to 13% in 2017 in the United States. The trade union involvement rate of unskilled and semi-skilled workers in the Netherlands fell from 23% in 2000 to 18% in 2012 and of skilled workers from 25% to 22%. There was a higher decrease in trade union involvement rate of manual (skilled and unskilled) workers in Sweden from

⁸ OECD (2019), *OECD Employment Outlook 2019: The Future of Work*, OECD Publishing, Paris. Available from: <https://doi.org/10.1787/9ee00155-en>.

⁹ VISSER, Jelle (2019). *Trade Unions in the Balance*, ILO ACTRAV Working Paper, International Labour Office, Geneva. Available from: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_722482.pdf.

83% in 2000 to 62% in 2016 than for non-manual workers, which fell from 79% to 74%. The deunionization of manual workers (not only in the industry) in Sweden was strongly associated with changes in government policy on (trade union-managed) unemployment insurance.

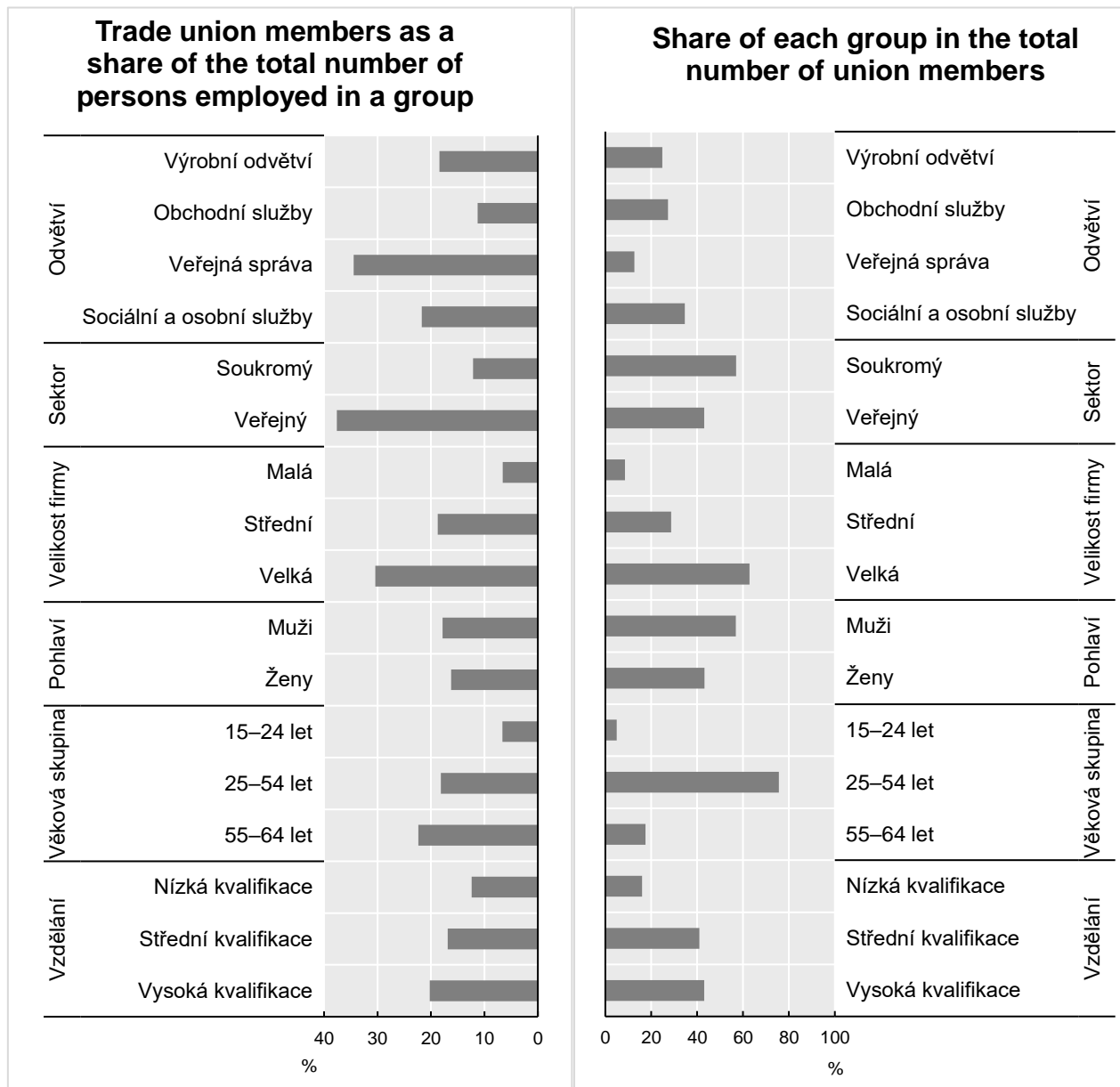
Figure 53 shows the **trade union involvement** of employees by individual groups (industry group, sector, company size, gender, age groups and education). In terms of **industry**, employees in **public administration (34% in the group of these employees)** or **social and personal services (22%)** are most often unionized. If we look at the **level of qualification** of employees, we observe the highest trade union involvement in the group among **highly skilled employees (20% of them)**.

Employees covered by **collective bargaining** often have **more favourable working conditions** than other employees in the labour market. According to an OECD study (2018)¹⁰, the **wages** of workers covered by collective agreements at company level are **higher** than the wages of workers not covered by a collective agreement in all OECD countries (except Latvia). Pay gaps may be more pronounced in countries with low collective bargaining coverage.

However, the role of collective bargaining is not just bargaining on wages, much of the content of a collective agreements is devoted to non-wage working conditions, such as employment protection, working hours, occupational health and safety, education and social protection. The aforementioned OECD study presents the results of an analysis of the relation between collective bargaining and working conditions. The results show that the **presence of trade unions is associated with a lower workload of employees and a better quality of the working environment**. The results suggest that trade union representation can play an important role in improving the quality of employment, in particular by reducing work intensity and increasing education and career advancement possibilities. Chapter 3 of this study deals with the analysis of the impact of collective agreements on the working conditions of employees in the Czech Republic.

¹⁰ OECD (2018), *OECD Employment Outlook 2018*, OECD Publishing, Paris. Available from: https://doi.org/10.1787/empl_outlook-2018-en.

Figure 53: Trade union involvement by groups of employees in OECD countries in 2013



Source: Taken from OECD (2017), *Collective bargaining in a changing world of work*. OECD Employment Outlook 2017. Available from: https://dx.doi.org/10.1787/empl_outlook-2017-8-en.

Industry: Manufacturing; trade services; Public administration; Social and personal services
Sector: Private; Public
Company size: Small; Medium; Large
Gender: Men; Women
Age group: 15–24 years; 25–54 years; 55–64 years
Education: Low skill; Medium skill; High skill

2.4 Covid-19 pandemic

According to the OECD (2020)¹¹, the initial **impact of the COVID-19 crisis on labour markets was ten times greater than that observed in the first months of the global financial crisis in 2008**: Total **hours worked fell by 12.2%** in the first three months compared to 1.2% in 2008. The initial unemployment response to the COVID-19 crisis has changed significantly. **Unemployment immediately jumped to record levels in several countries**, while in **others it has so far increased only slightly or not at all**. This different development across countries reflects **differences in national responses**. Some states rely on unemployment benefits to provide income for the unemployed. Other countries make extensive use of various systems to maintain employment through public support.

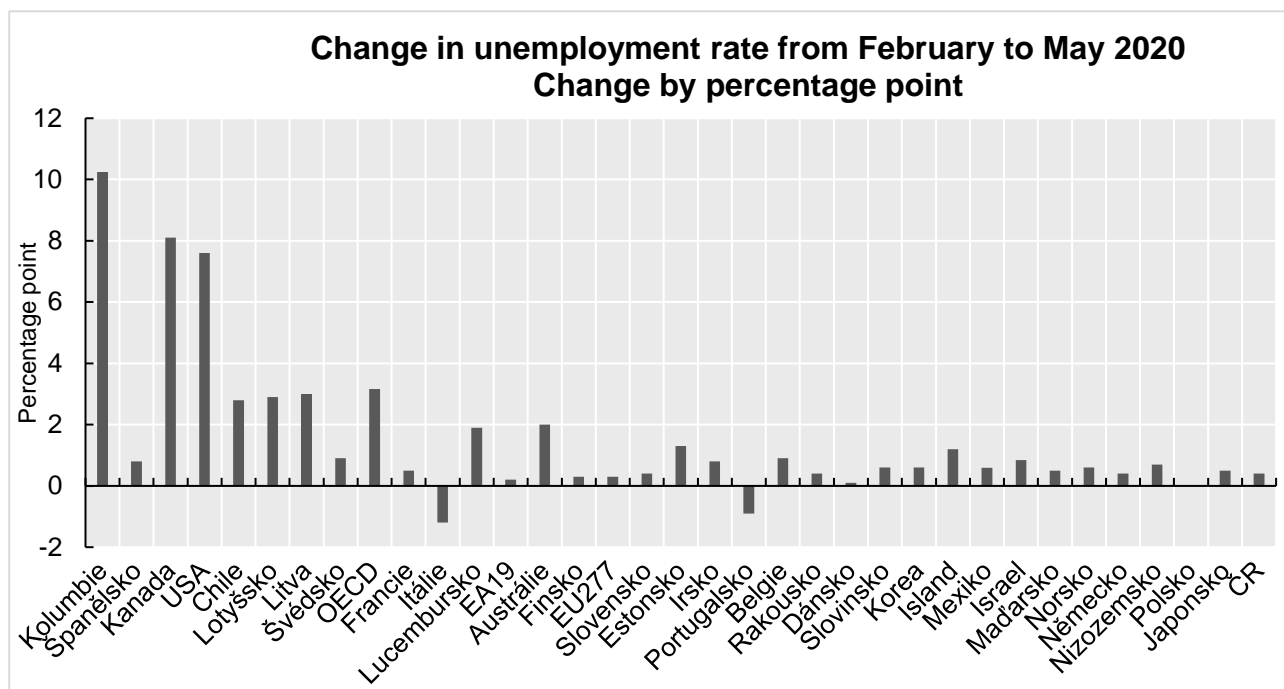
Figure 54 shows the **rise in unemployment in the first half of 2020**. The most significant growth in unemployment can be observed in **Colombia (10.2 pp)**, **Canada (8.1 pp)** or the **USA (7.6 pp)**. Unemployment growth was low in most European countries over the period under review. It was **0.4 pp** in the **Czech Republic**. The decrease in the unemployment rate in Italy and Portugal was caused by a decrease in the number of the unemployed due to the inactive job search of the unemployed during the pandemic.

A study by the International Labour Organization (2020)¹², which focuses on the least developed countries, points to **job losses disproportionately concentrated in low-skilled jobs**. The sectors most affected are **tourism, construction, manufacturing, restaurants, retail and transport, as well as agriculture and mining**. Another phenomenon examined was the level of **compliance with the lockdown**. According to research, the mobility of people decreased significantly less with the decreasing level of income. These are more vulnerable workers, especially the **self-employed persons, labourers and low-skilled workers**, whose nature of work requires a physical presence in the workplace and who do not have the opportunity to work from home. Another finding is the **growing trend of closing down micro-, small and medium-sized enterprises** due to the protracted crisis. Smaller companies have a significant share in the employment of low-skilled workers. However, they are inherently less resilient to economic shocks due to less liquidity and limited access to credit markets.

¹¹ OECD (2020), *OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis*, OECD Publishing, Paris. Available from: <https://doi.org/10.1787/1686c758-en>.

¹² Parisotto, A., Elsheikhi, A. 2020. *COVID-19, jobs and the future of work in the LDCs: A (disheartening) preliminary account*, ILO Working Paper 20 (Geneva, ILO).

Figure 54: Change in the unemployment rate as a percentage point from February to May 2020 or according to the availability of national data



Source: Taken from OECD, 2020 (Employment Outlook 2020: Worker Security and the COVID-19 Crisis)

Columbia; Spain; Canada; USA; Chile; Latvia; Lithuania; Sweden; OECD; France; Italy; Luxembourg; EA19; Australia; Finland; EU27; Slovakia; Estonia; Ireland; Portugal; Belgium; Austria; Denmark; Slovenia; Korea; Island; Mexico; Israel; Hungary; Norway; Germany; Netherlands; Poland; Japan; CR

3 Impact of collective bargaining on the working conditions of manual and non-manual workers in the Czech Republic

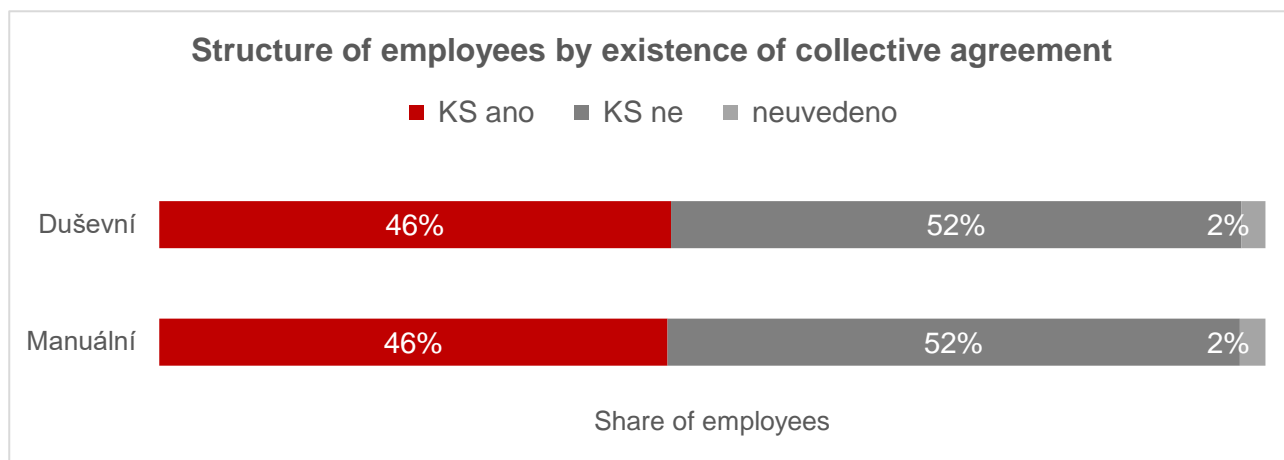
Collective bargaining often directs its demands to address the problems of individual groups of employees. The impact on working conditions then varies according to the different nature of employees' work. Manual and non-manual workers are different in nature; it is therefore necessary to examine the effects of collective agreements on the working conditions of employees separately for both groups, which will be addressed in this chapter.

A study carried out for the **ASO CR in 2019**¹³ dealt with the impact of collective bargaining on the working conditions of employees in the labour market. One of the results of the analysis was a more general finding that the **impact of collective bargaining on the working conditions of manual and non-manual workers is different**. However, the study did not go deeper into this partial finding. **In this part of our study**, we will build on the findings described in the 2019 study and manual and non-manual workers will be **analysed in detail in terms of the impact of collective bargaining on their working conditions**. The chapter will capture the differences in the indicators determining the working conditions of manual and non-manual workers, broken down by the existence of a collective agreement. Subchapter 3.3 will confirm or refute the impact of collective agreement by regression analysis.

Figure 55 shows the structure of manual and non-manual workers according to the existence of a collective agreement. **The coverage by collective agreement is the same** for both groups of employees. **46%** of employees work in a company that **has a collective agreement** and **52%** in a company that **does not have** a collective agreement.

¹³ DUSPIVOVÁ, HUSAŘÍKOVÁ, NESRSTOVÁ, 2019. *Role sociálního dialogu při snižování nerovností na českém trhu práce*. Within the project of the Association of Independent Trade Unions of the Czech Republic entitled Social Dialogue as a Prevention of Polarization of Society and a Tool for Working with Human Capital in the Time of Digitalization and Robotics. Available from: https://ipodpora.odborny.info/soubory/uploads/CASTII_01_ROLE_SD_FINAL.pdf.

Figure 55: Structure of manual and non-manual workers by existence of collective agreement in 2020



Source: ISPV (MLSA). Data valid as of 28 April 2021.

	CA yes	CA no	not specified
Non-manual			
Manual			

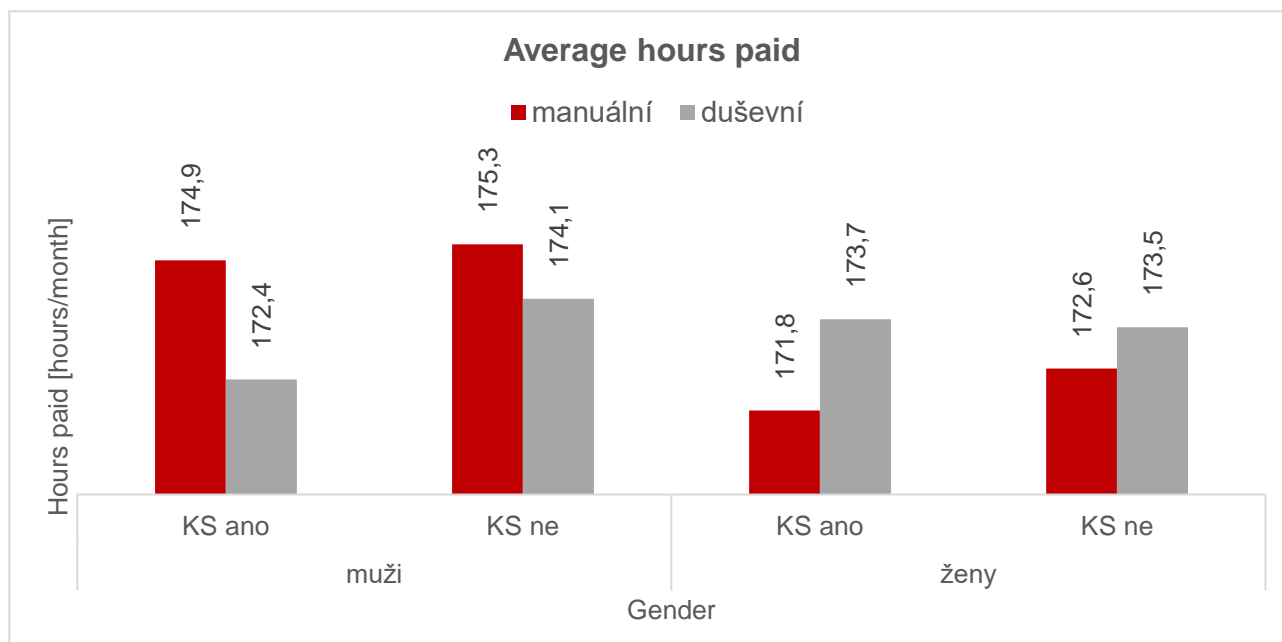
3.1 Working hours

One of the areas that has a significant impact on the working conditions of employees is the length and structure of working hours. This part deals with the **analysis of hours paid, leave and overtime** of manual and non-manual workers according to the existence of a collective agreement and according to individual characteristics (gender, age group, occupation, level of education, etc.). Thanks to this, it is possible to assess the impact of collective bargaining on specific groups of manual and non-manual workers.

3.1.1 Hours paid

The hours paid of manual and non-manual workers according to **the existence of a collective agreement and gender** are shown in Figure 56. In the group of **men**, employees **with a collective agreement** have **lower** average hours paid (**manual 174.9 hours per month and non-manual 172.4 hours per month**). The same is true for manually working women. These **women** covered by a **collective agreement** have lower hours paid (**171.8 hours per month**) than women who **do not have** a collective agreement in a company (**172.6 hours per month**). However, the opposite is true for **non-manually working women** and **women without a collective agreement** have slightly **lower** average hours paid (**173.5 hours per month**) than women **with a collective agreement** (**173.7 hours per month**).

Figure 56: Average hours paid of manual and non-manual workers by existence of collective agreement and gender in 2020

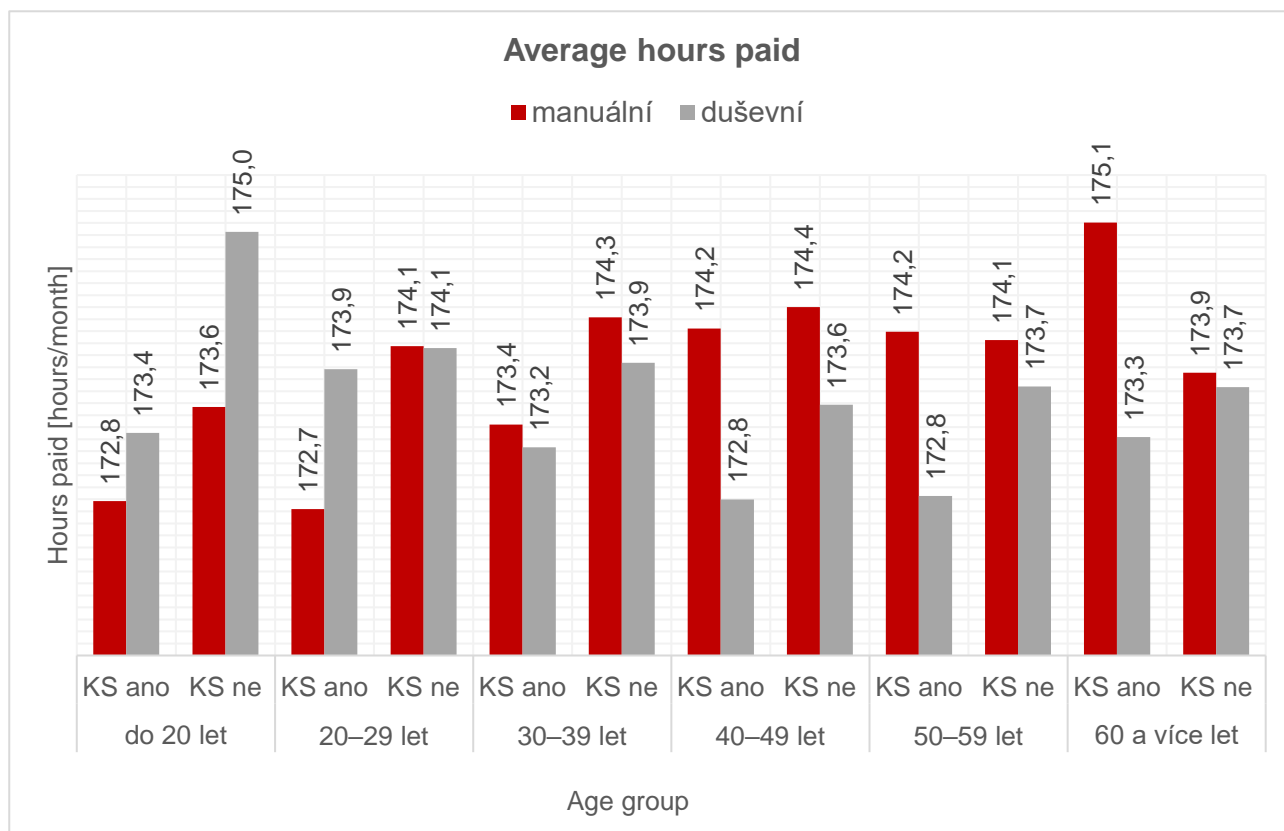


Source: ISPV (MLSA). Data valid as of 28 April 2021.

CA yes	manual CA no	non-manual CA yes	CA no
	men	women	

Hours paid **according to the existence of a collective agreement and age categories** are summarized in Figure 57. Manual and non-manual workers have **lower** average hours paid **under the protection of a collective agreement in all age groups. An exception is older manual workers**, especially in the age group of 60 years and older. In this group, employees **with a collective agreement** have higher average hours paid (**175.1 hours**) than employees **without a collective agreement** (**173.9 hours per month**).

Figure 57: Average hours paid of manual and non-manual workers by existence of collective agreement and age in 2020

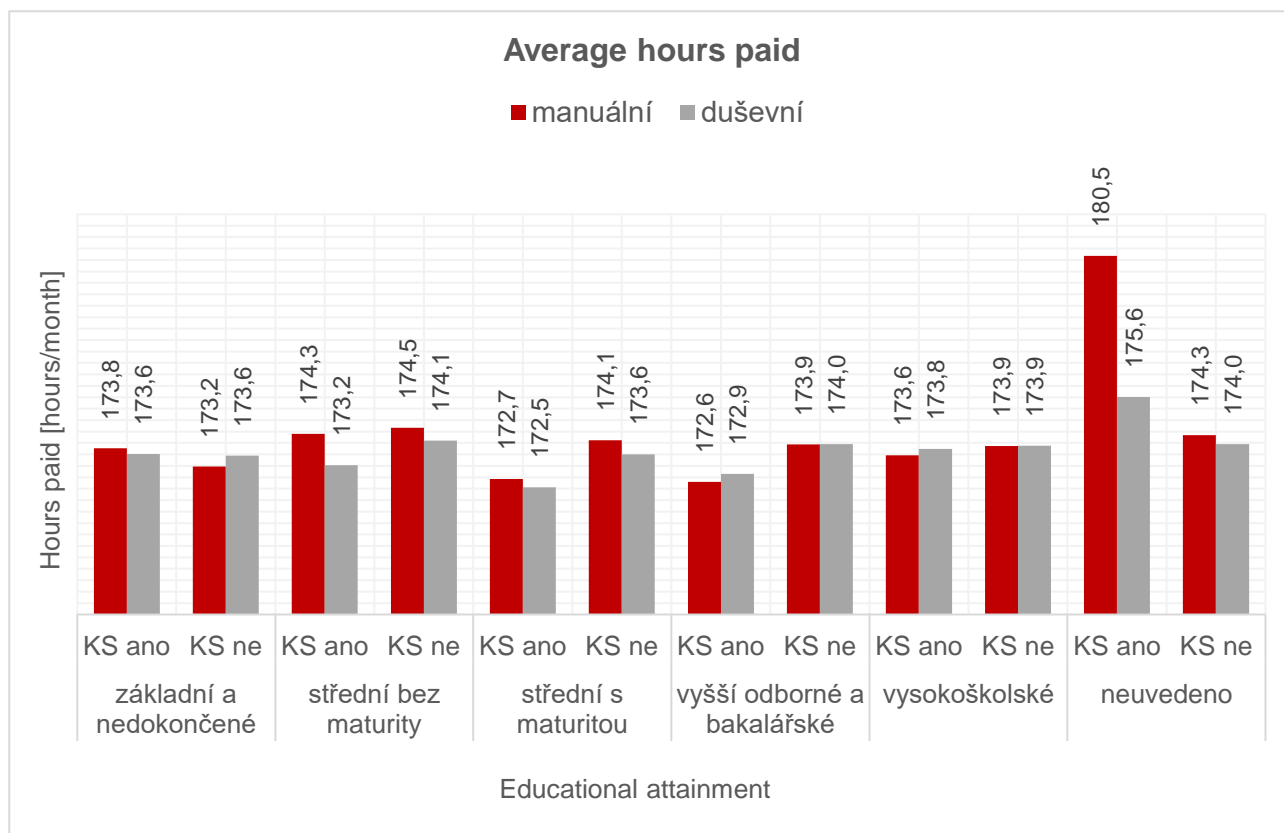


Source: ISPV (MLSA). Data valid as of 28 April 2021.

	manual	non-manual
	CA yes	CA no
under 20 yrs	20–29 yrs	30–39 yrs
40–49 yrs	50–59 yrs	60 yrs and over

If we look at the hours paid by **educational attainment and the existence of a collective agreement** (Figure 58), it can be observed that manual and non-manual workers **covered by a collective agreement** have **lower** hours paid on average at all levels of education. An exception is **manual workers with primary and incomplete education**. Employees **covered** by a collective agreement have slightly higher hours paid at work (**173.8 hours per month**) than employees **without a collective agreement** (**173.2 hours per month**).

Figure 58: Average hours paid of manual and non-manual workers by existence of collective agreement and educational attainment in 2020

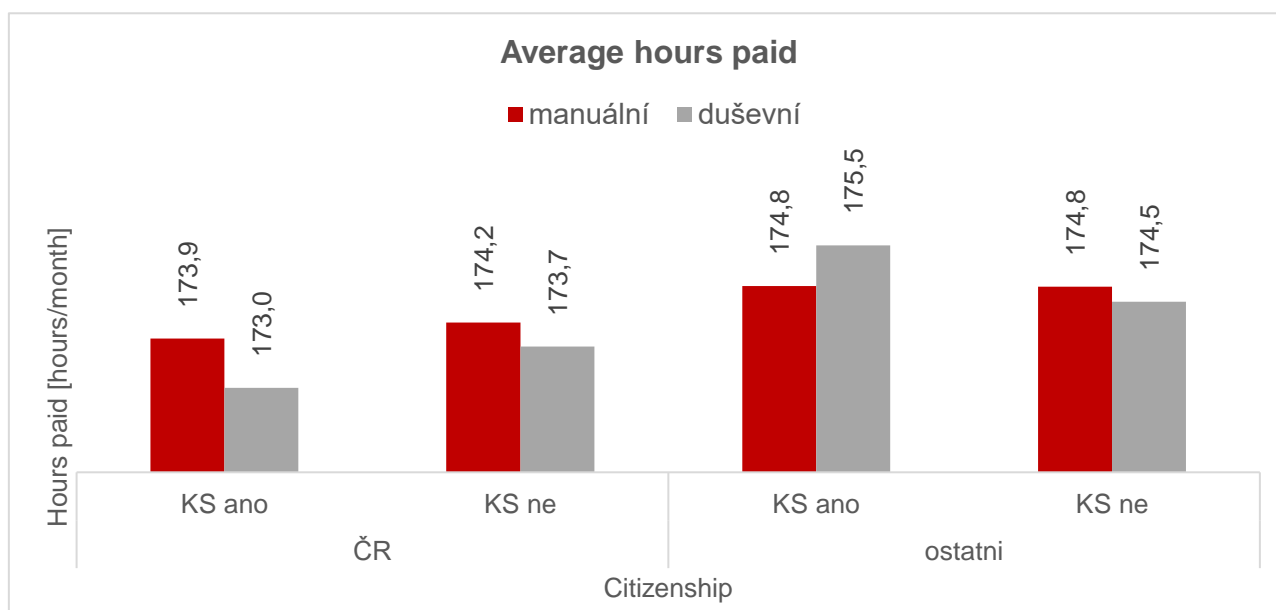


Source: ISPV (MLSA). Data valid as of 28 April 2021.

primary and incomplete	secondary without SSLE	manual CA yes university	non-manual CA no secondary with SSLE not specified	tertiary technical and bachelor
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In general, employees with Czech citizenship have lower hours paid at work than employees of other citizenships. According to Figure 59, it can also be stated that **Czech employees under the protection of a collective agreement have lower hours paid (manual 173.9 hours, non-manual 173 hours) than employees without a collective agreement (manual 174.2 hours and non-manual 173.7 hours)**. The situation is slightly different in other citizenships. In particular, employees of **foreign citizenship with the non-manual nature of work under the protection of a collective agreement work more on average (175.5 hours) than employees without a collective agreement (174.5 hours)**.

Figure 59: Average hours paid of manual and non-manual workers by existence of collective agreement and citizenship in 2020



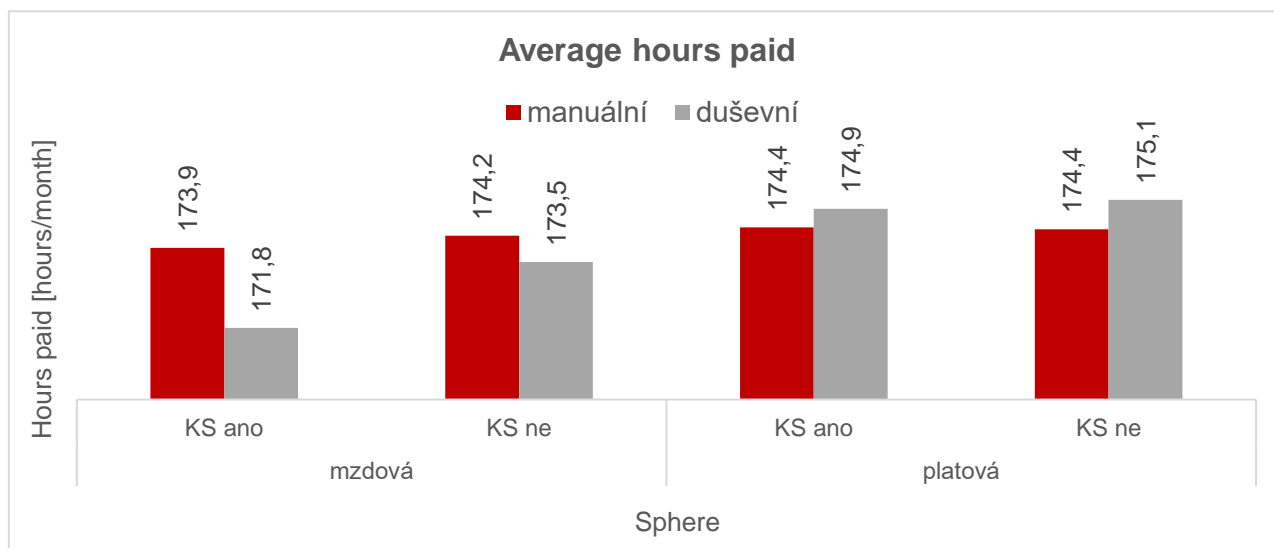
Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual	non-manual
CA yes	CA no
CR	other

From the point of view of the **sphere** (Figure 60), it can be stated that in the **wage sphere** the **differences** between employees under the protection of a collective agreement are higher in comparison with employees without a collective agreement than in the salary sphere. In particular, **non-manual workers** in companies **with a collective agreement** have lower hours paid (**171.8 hours per month**) than workers **without a collective agreement** in a company (**173.5 hours per month**).

Figure 61 shows differences in **hours paid by the size of the employer and the existence of a collective agreement**. In **smaller companies**, employees **under the protection of a collective agreement** have **higher hours paid** on average than employees without the protection of a collective agreement. This effect is more pronounced in manual jobs compared to non-manual ones. If we look, for example, at employees of companies in the size **category of 10–49 employees**, **manual workers under the protection of a collective agreement** have average hours paid of **179.7 hours per month** and employees **without the protection of a collective agreement** **175 hours per month**. On the other hand, manual workers **with a collective agreement** have hours paid of **170.9 hours per month** and **without a collective agreement** **172.7 hours per month** in the size category of **over 1,000 employees**.

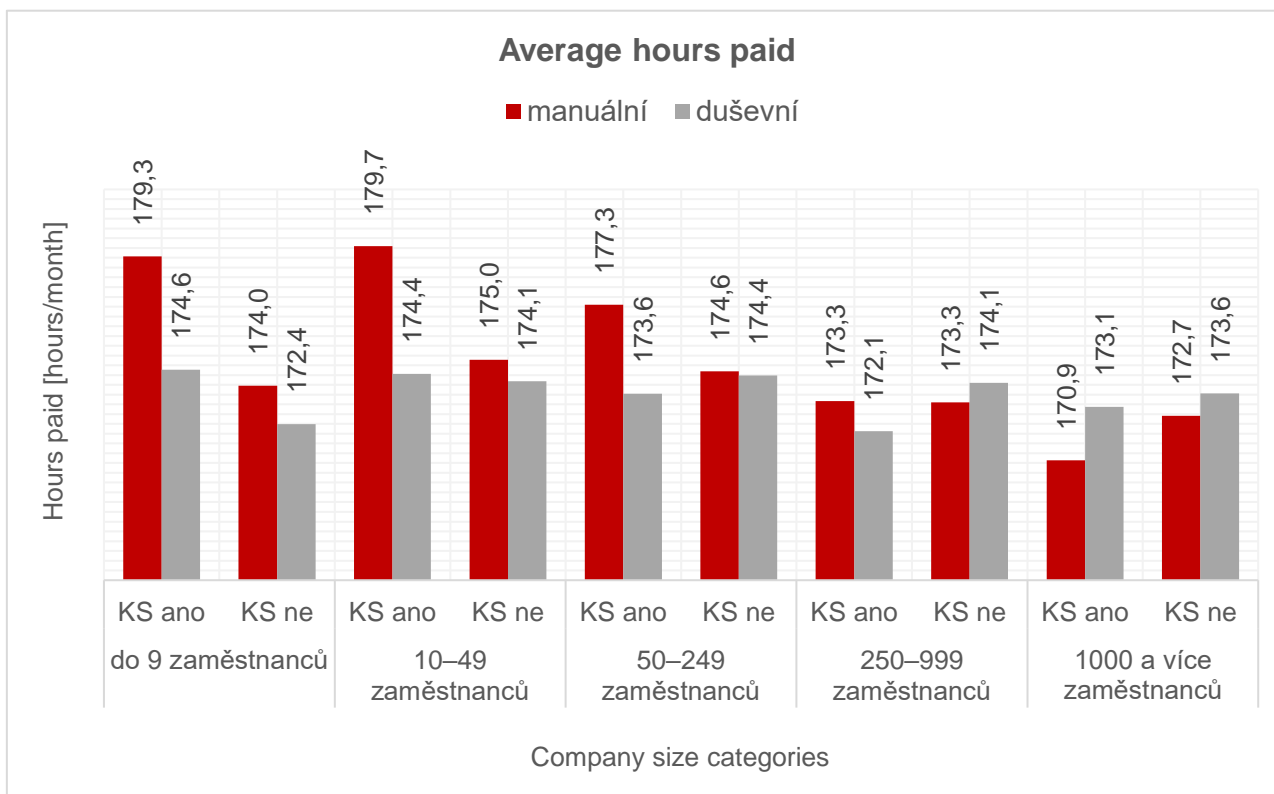
Figure 60: Average hours paid of manual and non-manual workers by existence of collective agreement and sphere in 2020



Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual CA yes wage	non-manual CA no salary
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Figure 61: Average hours paid of manual and non-manual workers by existence of collective agreement and business size in 2020

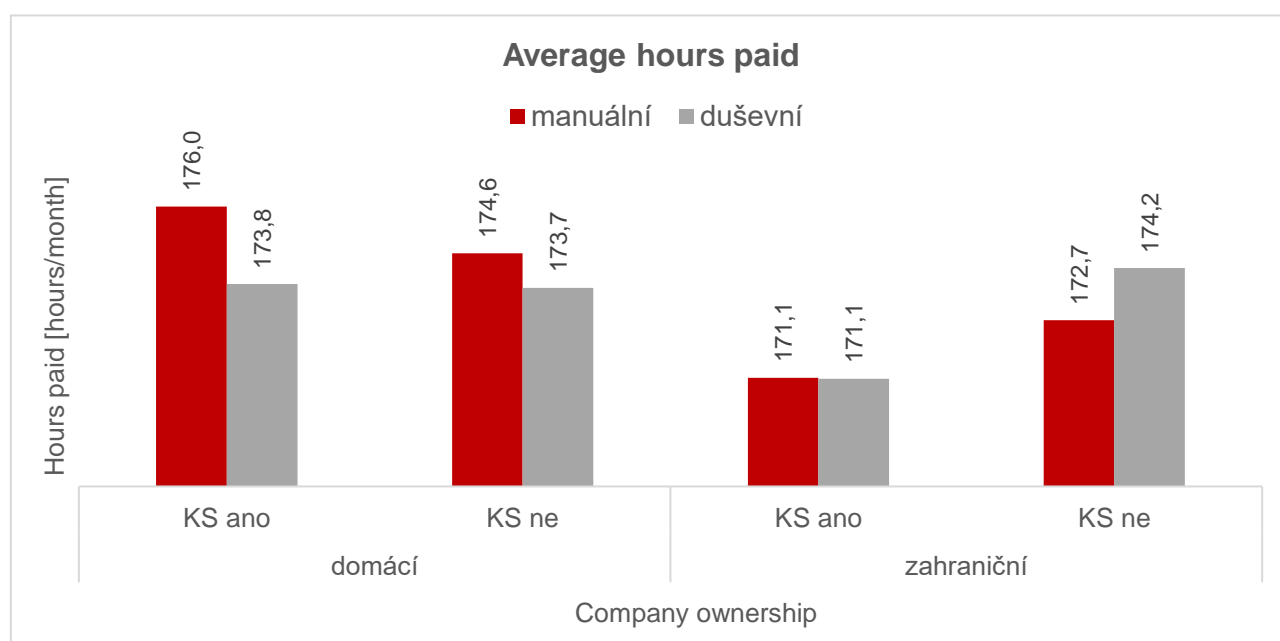


Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual CA yes up to 9 employees	non-manual CA no 10–49 employees	non-manual CA no 50–249 employees	non-manual CA no 250–999 employees	non-manual CA no 1000 and more
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The average hours paid by the **business ownership and the existence of a collective agreement** are shown in Figure 62. The effect of a collective agreement on lower hours paid is probably stronger **in foreign-owned companies**. **Manual and non-manual workers under the protection of a collective agreement** have average monthly hours paid of **171.1 hours** per month, while manual workers **without a collective agreement** have hours paid of **172.7 hours** per month and non-manual workers **174.2 hours** per month.

Figure 62: Average hours paid of manual and non-manual workers by existence of collective agreement and company ownership in 2020



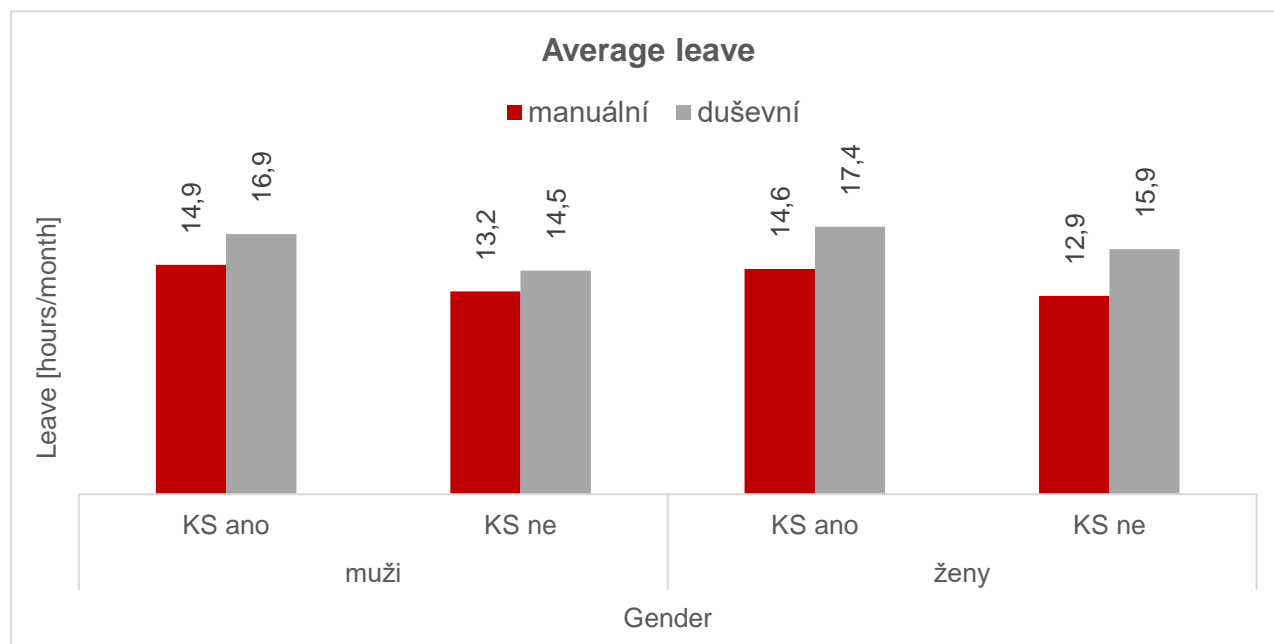
Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual CA yes domestic
non-manual CA no foreign

3.1.2 Leave

Another indicator of the level of working conditions of employees is the extent of leave. Employees **under the protection of a collective agreement usually take more leave** than employees without the protection of a collective agreement. If we look at Figure 63 showing the average monthly leave of manual and non-manual workers **by gender and the existence of a collective agreement**, it can be seen that higher use of leave by workers with a collective agreement **applies to men and women** also by the division into **manual and non-manual jobs**. **Non-manually working women (17.4 hours per month) and men (16.9 hours per month) take leave the most.**

Figure 63: Average leave of manual and non-manual workers by existence of collective agreement and gender in 2020

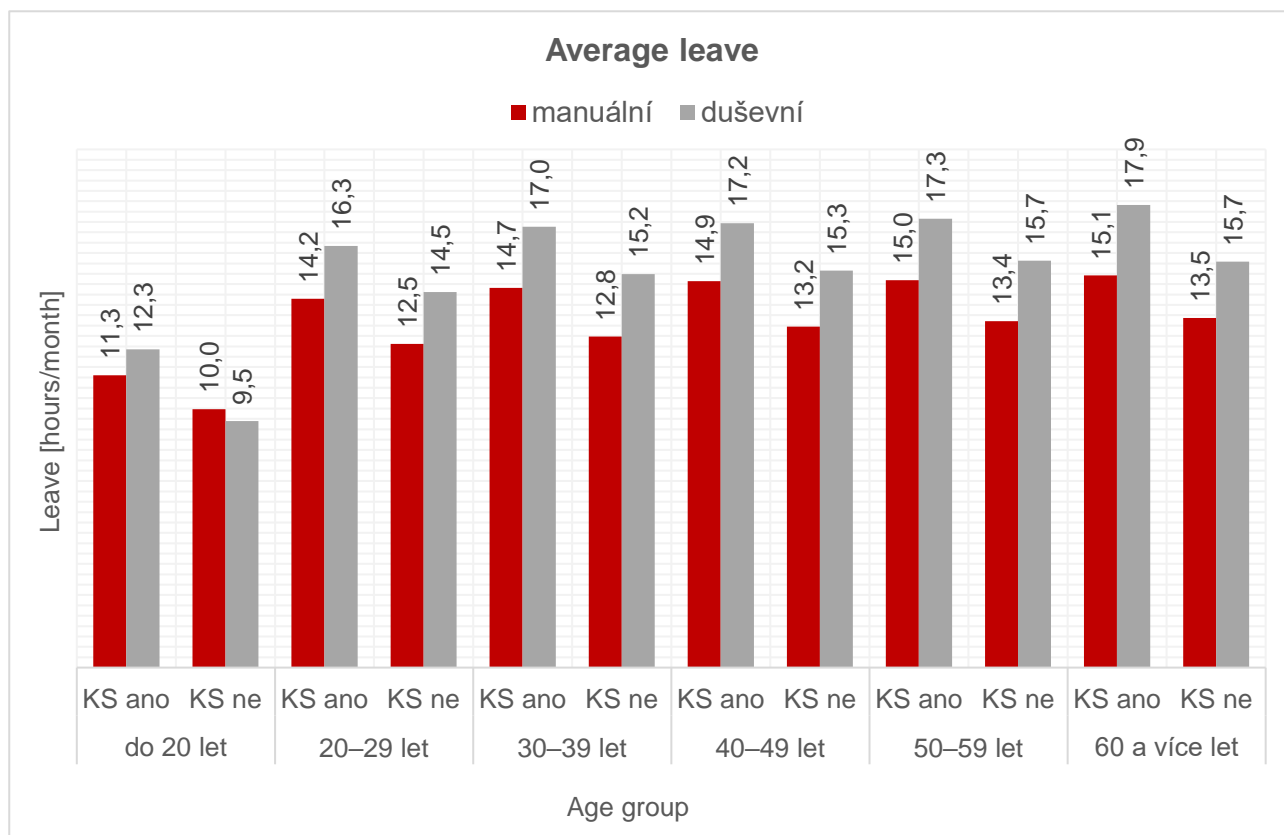


Source: ISPV (MLSA). Data valid as of 28 April 2021.

CA yes	manual CA no	non-manual CA yes	CA no
	men	women	

Employees **under the protection of a collective agreement in all age groups** take higher amount of leave; see Figure 64. Employees of higher age groups have a higher average monthly leave. **The highest** leave is enjoyed by **non-manual workers over the age of 60 under the protection of a collective agreement (17.9 hours per month)**. The lowest amount of leave is taken by manual and non-manual workers without a collective agreement under the age of 20 (10 hours per month in manual and 9.5 hours per month in non-manual workers).

Figure 64: Average leave of manual and non-manual workers by existence of collective agreement and age in 2020

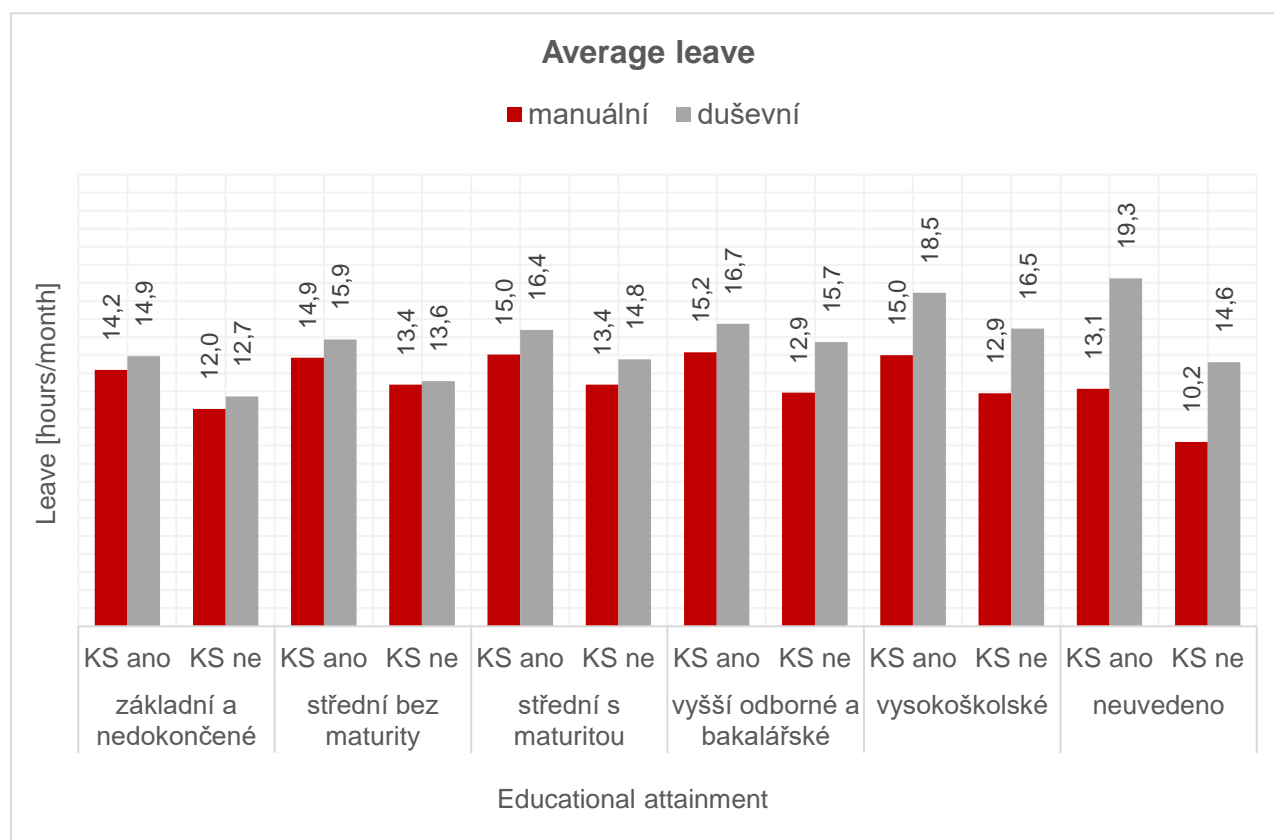


Source: ISPV (MLSA). Data valid as of 28 April 2021.

	manual	non-manual
	CA yes	CA no
under 20 yrs	20–29 yrs	30–39 yrs
	40–49 yrs	50–59 yrs
		60 yrs and over

In terms of **educational attainment**, both manual and non-manual workers under the **protection of a collective agreement take higher amount of leave** than employees who do not have a collective agreement in their company (Figure 65). The **highest amount of leave** is taken by **non-manually working university graduates** (except for the category not specified) with a concluded collective agreement in their company, who have an average leave of **18.5 hours per month**. On the other hand, manual workers with primary and incomplete education (except for the category not specified) without the protection of a collective agreement take the lowest amount of leave, 12 hours per month on average.

Figure 65: Average leave of manual and non-manual workers by existence of collective agreement and educational attainment in 2020



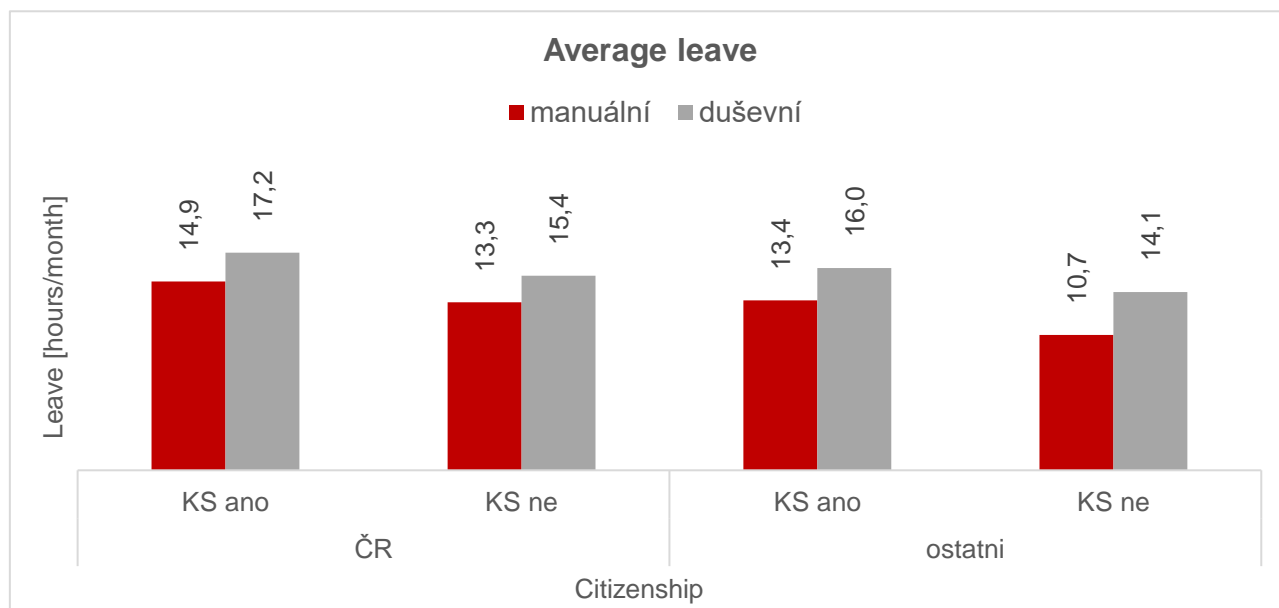
Source: ISPV (MLSA). Data valid as of 28 April 2021.

primary and incomplete	secondary without SSLE	manual CA yes	secondary with SSLE	non-manual CA no	tertiary technical and bachelor
	university		not specified		

Figure 66 shows that manual and non-manual workers **with Czech and other citizenship under the protection of a collective agreement take higher amount of leave** than workers without a collective agreement. Employees under the protection of a collective agreement with Czech citizenship and a **non-manual type of job** have the **highest** average monthly leave (**17.2 hours per month**). Manual workers with other citizenship without the protection of a collective agreement have the lowest amount of leave (10.7 hours per month).

From the point of view of the **sphere**, the impact of a collective agreement on the extent of taking leave can be observed especially in the wage sphere (Figure 67). This effect is no longer so significant in manual jobs in the **salary** sphere and in non-manual jobs, **employees without a collective agreement even take the most leave (20.9 hours per month)**, which is more even in comparison with employees with a collective agreement (18.5 hours per month). The lowest amount of leave is recorded in employees working manually in the wage sphere without the protection of a collective agreement (12.8 hours per month on average).

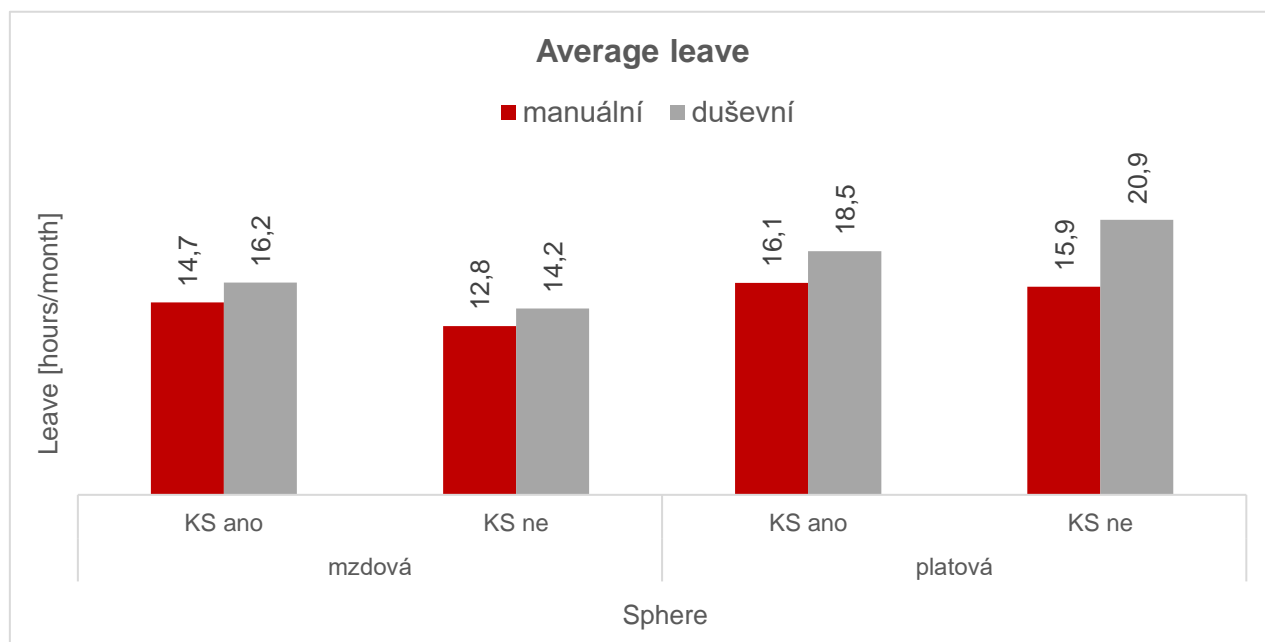
Figure 66: Average leave of manual and non-manual workers by existence of collective agreement and citizenship in 2020



Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual CA yes CR	non-manual CA no other
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Figure 67: Average leave of manual and non-manual workers by existence of collective agreement and sphere in 2020

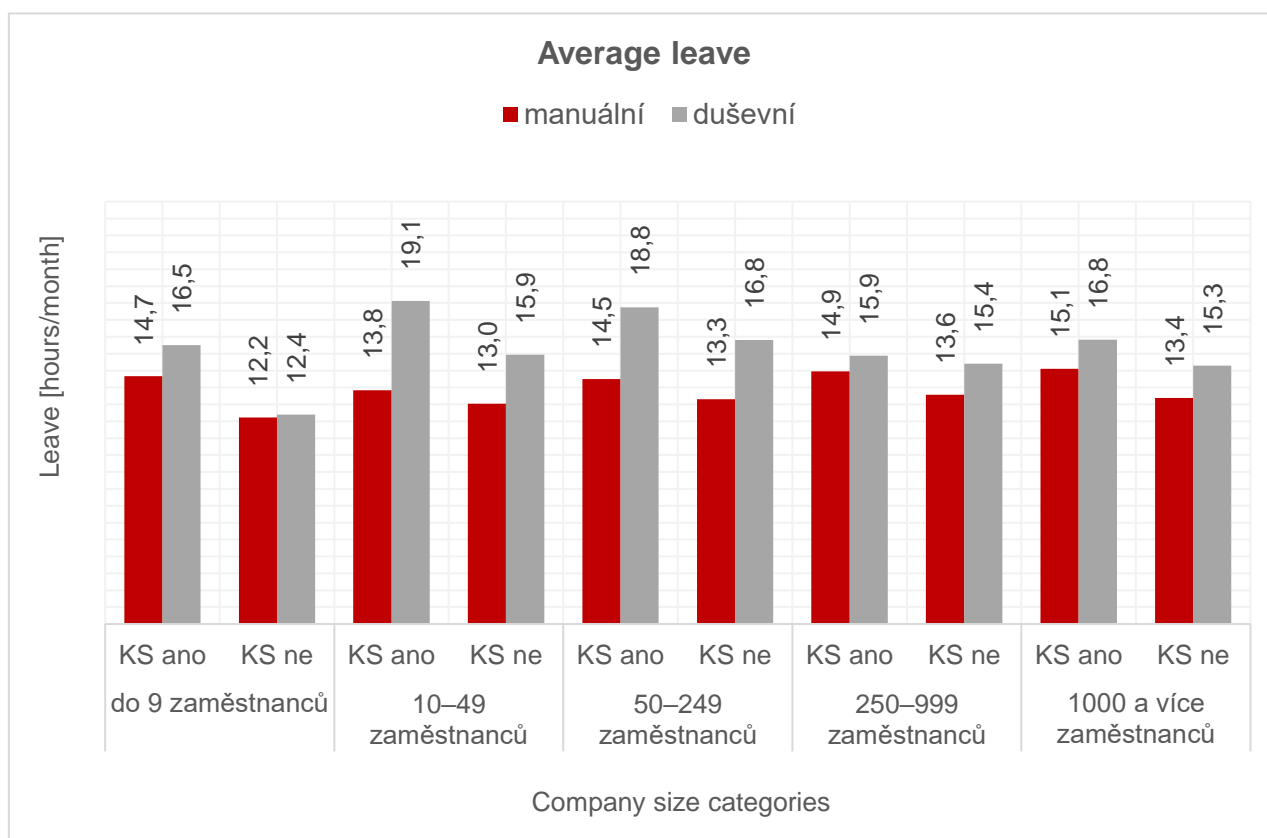


Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual CA yes wage	non-manual CA no salary
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Figure 68 shows the fact that in all **size categories of employers**, manual and non-manual workers **under the protection of a collective agreement have a higher average leave** compared to employees in companies without a concluded collective agreement. The **highest** leave is taken by employees **with a non-manual type of occupation in companies with 10 to 49 employees** with a collective agreement, namely **19.1 hours per month** on average. Employees working manually in small enterprises with up to 9 employees without a collective agreement take the lowest amount of leave (12.2 hours per month on average).

Figure 68: Average leave of manual and non-manual workers by existence of collective agreement and business size in 2020



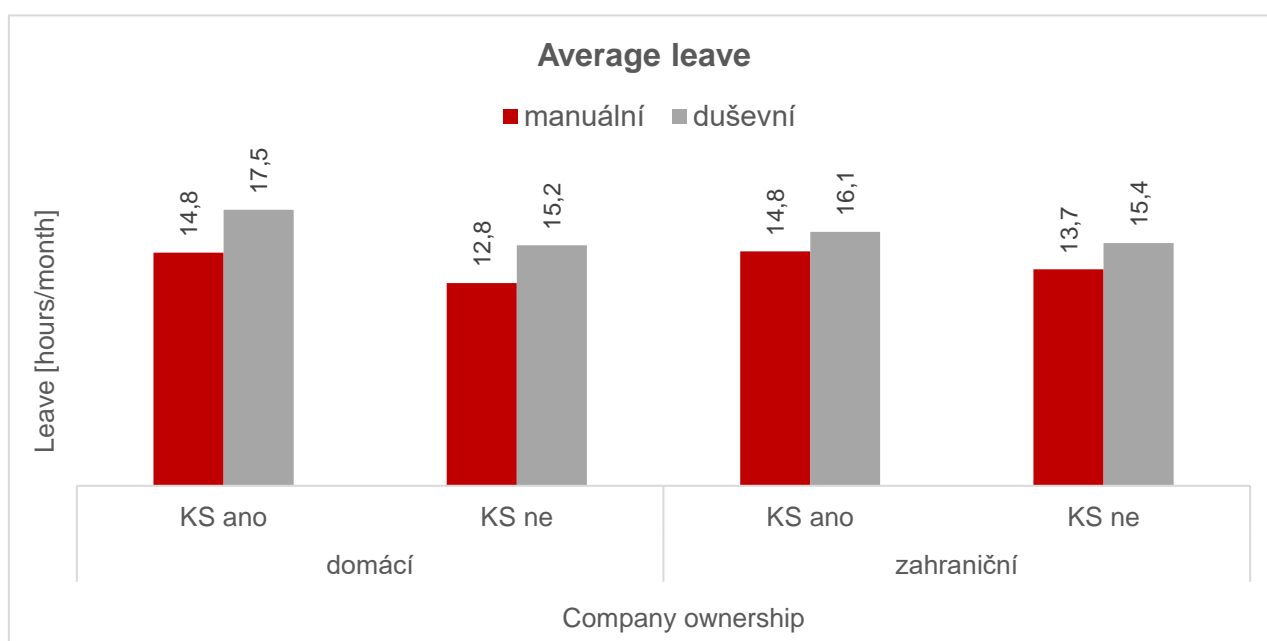
Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual	non-manual
CA yes	CA no
up to 9 employees	10–49 employees
50–249 employees	250–999 employees
1000 and more	

The last Figure 69 examining the extent of leave shows the differences in the average leave of manual and non-manual workers **by the existence of a collective agreement and company ownership**. It is also true here that **employees under the protection of a collective agreement take higher amount of leave** compared to employees without a

concluded collective agreement, both in domestic companies and in foreign-owned companies. Employees with a collective agreement **with a non-manual type of occupation in companies with a domestic owner** take the **highest** amount of leave (**17.5 hours per month on average**). On the other hand, manual workers without the protection of a collective agreement also in domestic-owned companies take the lowest amount of leave (12.8 hours per month on average).

Figure 69: Average leave of manual and non-manual workers by existence of collective agreement and company ownership in 2020



Source: ISPV (MLSA). Data valid as of 28 April 2021.

CA yes manual CA no non-manual CA yes CA no
domestic foreign

3.1.3 Overtime

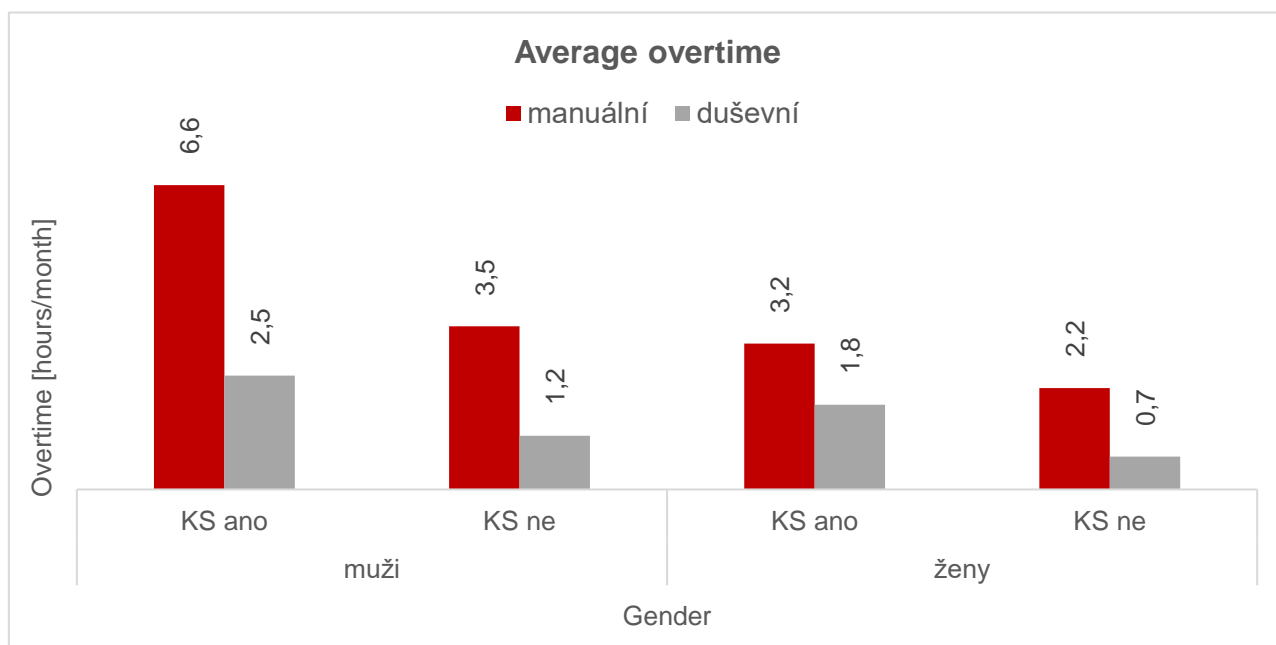
A specific indicator is the **extent of overtime**. In general, employees **under the protection of a collective agreement** have **more overtime** in ISPV statistics than employees without a collective agreement. The above-mentioned study of ASO, 2019¹⁴ shows that although

¹⁴ DUSPIVOVÁ, HUSAŘÍKOVÁ, NESRSTOVÁ, 2019. *Role sociálního dialogu při snižování nerovností na českém trhu práce*. Within the project of the Association of Independent Trade Unions of the Czech Republic entitled Social Dialogue as a Prevention of Polarization of Society and a Tool for Working with Human

employees protected by a collective agreement show higher overtime work, their **total hours paid are lower** than the hours paid of employees without protection by a collective agreement. Overtime is part of hours paid and the fact that the total hours paid are lower for employees with a collective agreement is also confirmed by subchapter 3.1.1 in this study. It is therefore a **more effective setting of working hours conditions** for employees with collective agreements.

Figure 70 shows the average monthly overtime of manual and non-manual workers by the **existence of a collective agreement and gender**. It has already been mentioned that employees **with a collective agreement** often show **more overtime**, especially manual workers. According to the figure, **men with a manual nature of work with a collective agreement** have the **highest** overtime (6.6 hours per month on average). We observe the **lowest** overtime in **women without a collective agreement with a non-manual nature of work** (0.7 hours per month on average).

Figure 70: Average overtime of manual and non-manual workers by existence of collective agreement and gender in 2020



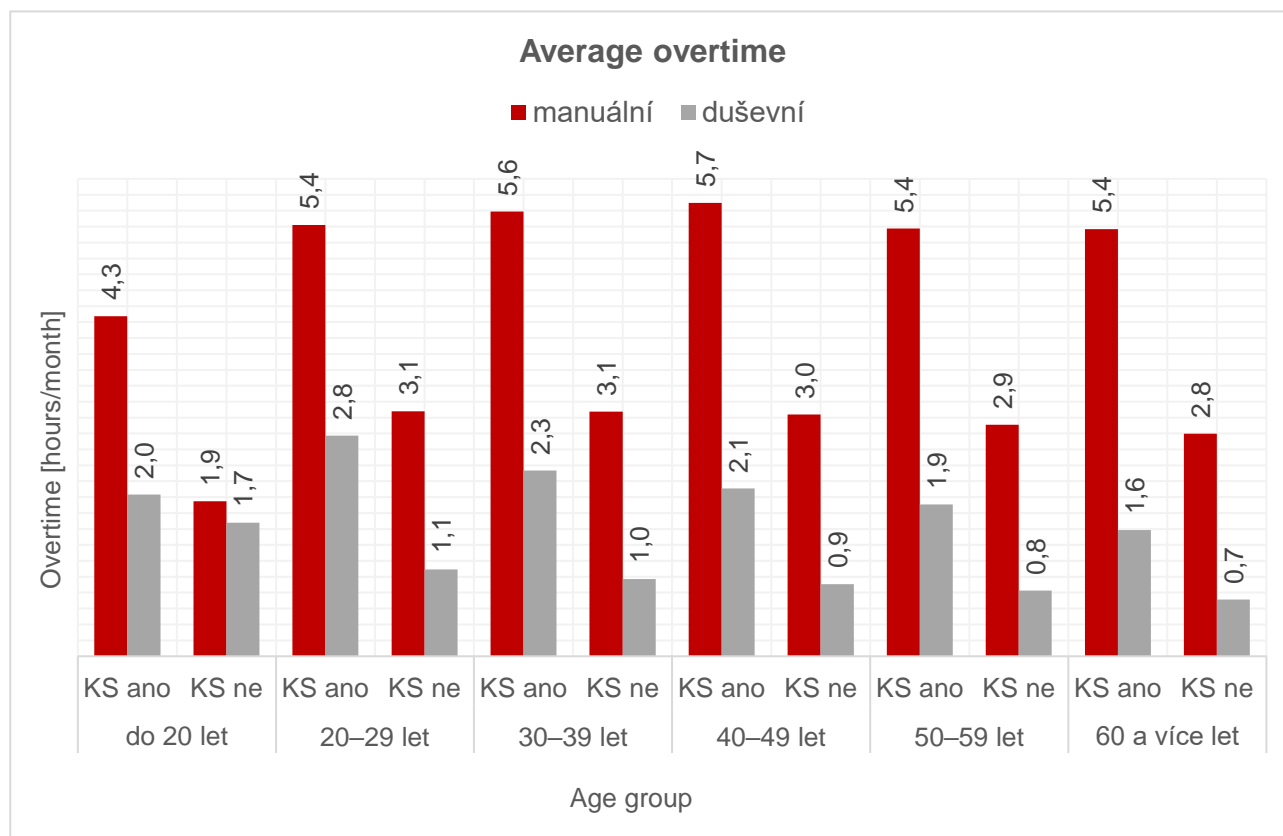
Source: ISPV (MLSA). Data valid as of 28 April 2021.

CA yes	manual CA no men	non-manual CA yes women	CA no
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Capital in the Time of Digitalization and Robotics. Available from: https://ipodpora.odborny.info/soubory/uploads/CASTII_01_ROLE_SD_FINAL.pdf.

According to Figure 71, it can be confirmed that **manual and non-manual workers in all age groups under the protection of a collective agreement show more overtime** than employees without a collective agreement. We record the **highest** overtime in the age group of **40–49 years in manual workers** in companies with a collective agreement (5.7 hours per month on average). Employees **with a non-manual type of job aged 60 and over** have the **lowest** overtime in companies that **do not have a collective agreement** (0.7 hours per month on average).

Figure 71: Average overtime of manual and non-manual workers by existence of collective agreement and age in 2020



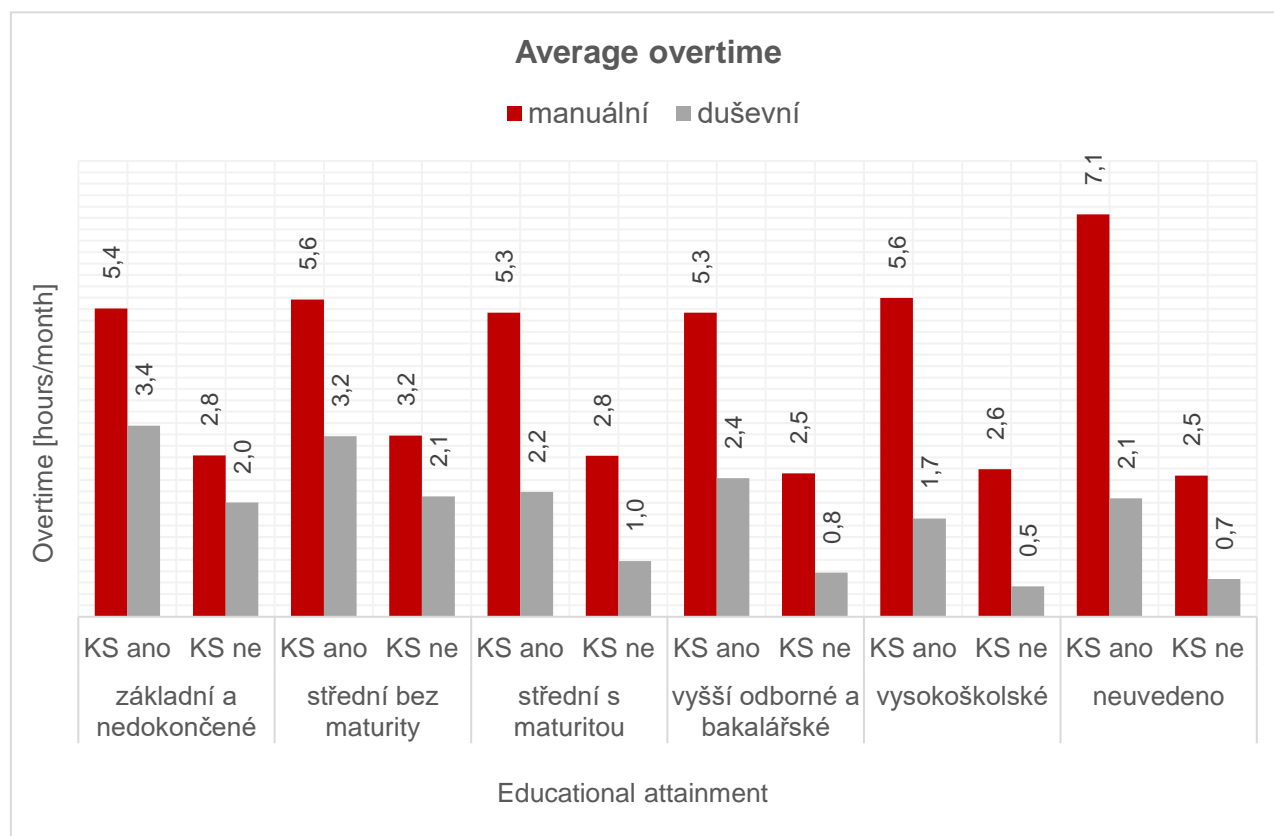
Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual non-manual
 CA yes CA no
 under 20 yrs 20–29 yrs 30–39 yrs 40–49 yrs 50–59 yrs 60 yrs and over

Figure 72 shows the extent of overtime by **the level of educational attainment**. With the exception of the category not specified, **manual workers with secondary education without a SSLE and with a university degree in companies with a collective agreement** have the **highest** average monthly overtime (5.6 hours per month on average). **The lowest**

overtime is reported in **non-manual workers with a university degree** in companies **without a collective agreement** (0.5 hours per month on average).

Figure 72: Average overtime of manual and non-manual workers by existence of collective agreement and educational attainment in 2020



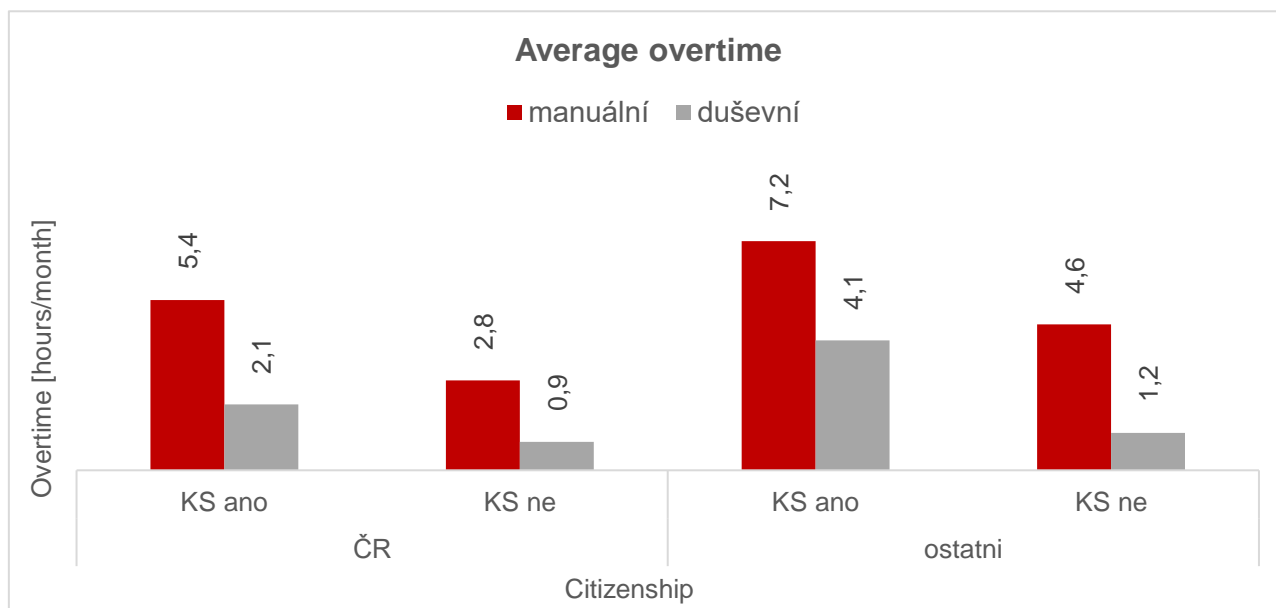
Source: ISPV (MLSA). Data valid as of 28 April 2021.

primary and incomplete	secondary without university	manual CA yes SSLE	non-manual CA no not specified	secondary with SSLE	tertiary technical and bachelor
------------------------	------------------------------	--------------------	--------------------------------	---------------------	---------------------------------

In terms of **citizenship** (Figure 73), we observe **higher overtime** in **manual workers with other citizenships** in companies with a collective agreement (7.2 hours per month on average). Employees of **Czech citizenship** have the **lowest** overtime in companies **without a collective agreement** with a **non-manual** type of job (0.9 hours per month on average).

From the point of view of the **sphere**, **higher** overtime can be observed in employees with a collective agreement; see Figure 74. In particular, these are employees **in the wage sphere with a manual** nature of work (5.8 hours per month). Employees in companies **without a collective agreement with a non-manual** type of job show **less** overtime. The lowest are in the **salary sphere** among these employees (0.6 hours per month on average).

Figure 73: Average overtime of manual and non-manual workers by existence of collective agreement and citizenship in 2020



Source: ISPV (MLSA). Data valid as of 28 April 2021.

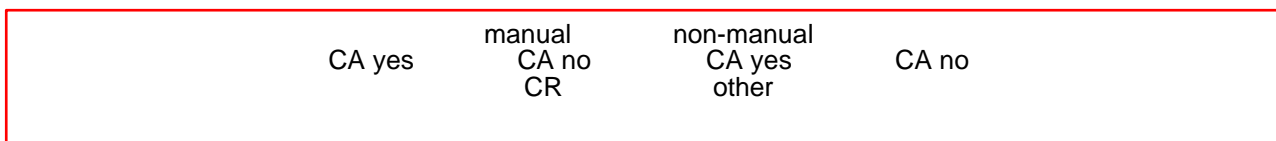
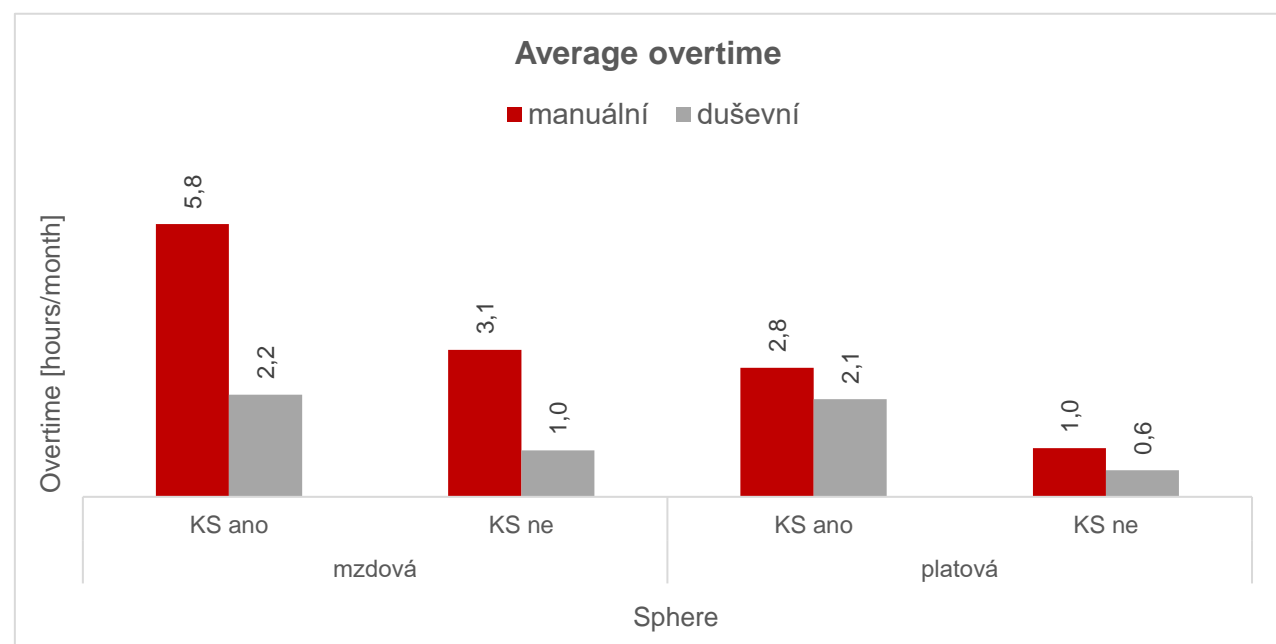
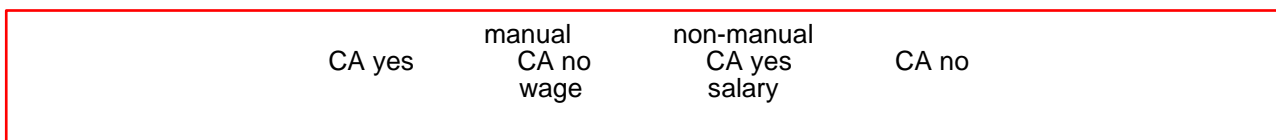


Figure 74: Average overtime of manual and non-manual workers by existence of collective agreement and sphere in 2020

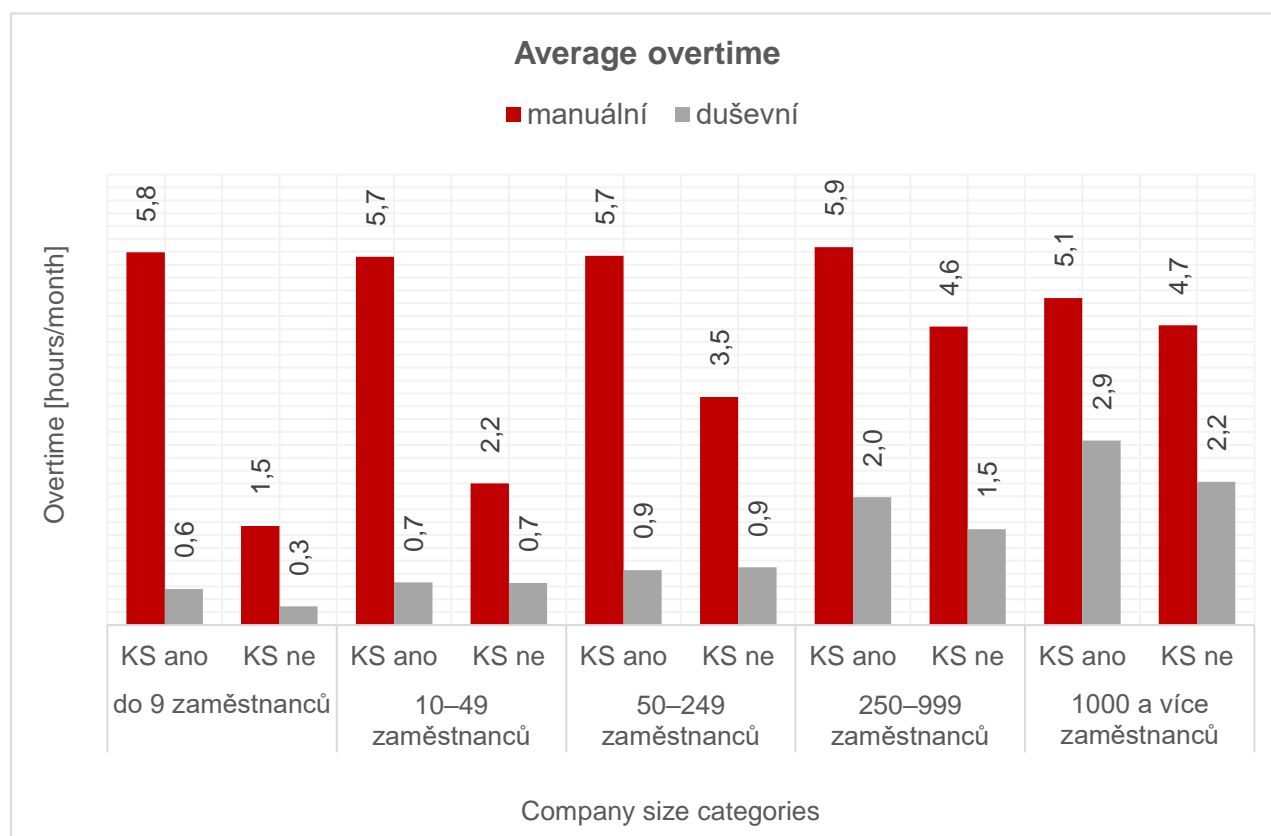


Source: ISPV (MLSA). Data valid as of 28 April 2021.



Average overtime by **size of employer** is shown in Figure 75. **Manual workers** in companies **with a collective agreement** again have the **highest** overtime. These employees in the size category of **250–999 employees** work an average of 5.9 hours overtime. Employees with a non-manual nature of work do not have high differences in overtime work if we compare employees in individual size categories by the existence of a collective agreement. Overall, **non-manual workers in small companies** with up to 9 employees **without a collective agreement** have the **lowest** overtime (0.3 hours per month on average).

Figure 75: Average overtime of manual and non-manual workers by existence of collective agreement and company size in 2020



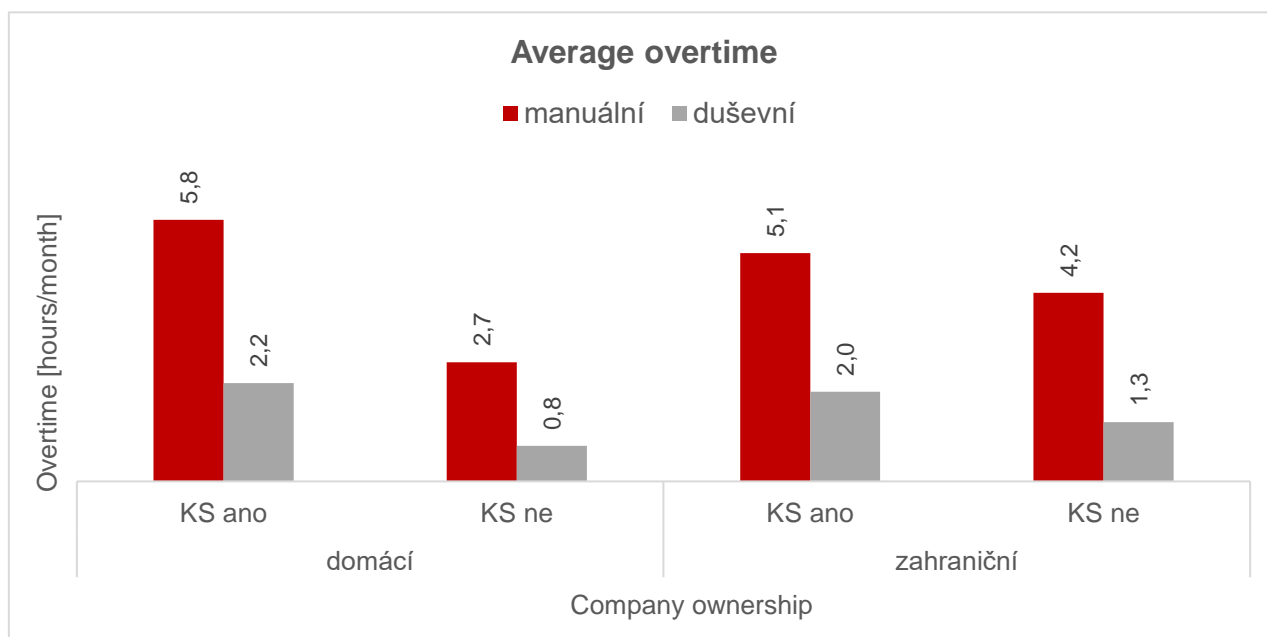
Source: ISPV (MLSA). Data valid as of 28 April 2021.

manual CA yes	non-manual CA no
up to 9 employees	10–49 employees
50–249 employees	250–999 employees
1000 and more	

Figure 76 shows that, in terms of **ownership**, manual and non-manual workers **with a collective agreement** in both domestic- and foreign-owned companies show **higher** overtime. The **highest** overtime work is held by **manual workers in domestic** companies with a collective agreement (average 5.8 hours per month) and the **lowest** by **non-manual**

workers in companies also **with domestic** ownership, but **without a collective agreement** (average 0.8 hours per month).

Figure 76: Average overtime of manual and non-manual workers by existence of collective agreement and company ownership in 2020



Source: ISPV (MLSA). Data valid as of 28 April 2021.

CA yes manual CA no non-manual CA yes CA no
domestic foreign

3.2 Remuneration

An important aspect in assessing the impact of a collective agreement on employees' working conditions is the **level of remuneration**. Employees' earnings vary according to individual characteristics and a significant difference can also be observed in manual and non-manual jobs. **The impact of a collective agreement** will therefore be assessed in this chapter by comparing the **median wage** of individual categories of employees protected by a collective agreement and vice versa. The median gross monthly wage divides employees exactly in half and says that half of employees have a higher wage and half lower than this value. Therefore, this indicator is considered **more appropriate for comparing the wage level** of individual specific groups of employees in this subchapter and in general.

The median gross monthly wage of manual and non-manual workers **according to the existence of a collective agreement and gender** is shown in Figure 77. According to the

figure, it can be stated that **both men and women** have a **higher median gross monthly wage** in companies **with a collective agreement** compared to employees without a collective agreement. **The highest median** is in **men** working non-manually in companies with a collective agreement (the median value is more than **CZK 48,000 per month**). On the contrary, the lowest median value can be observed in manually working women in companies without a collective agreement (over CZK 22,000 per month).

Figure 77: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and gender in 2020

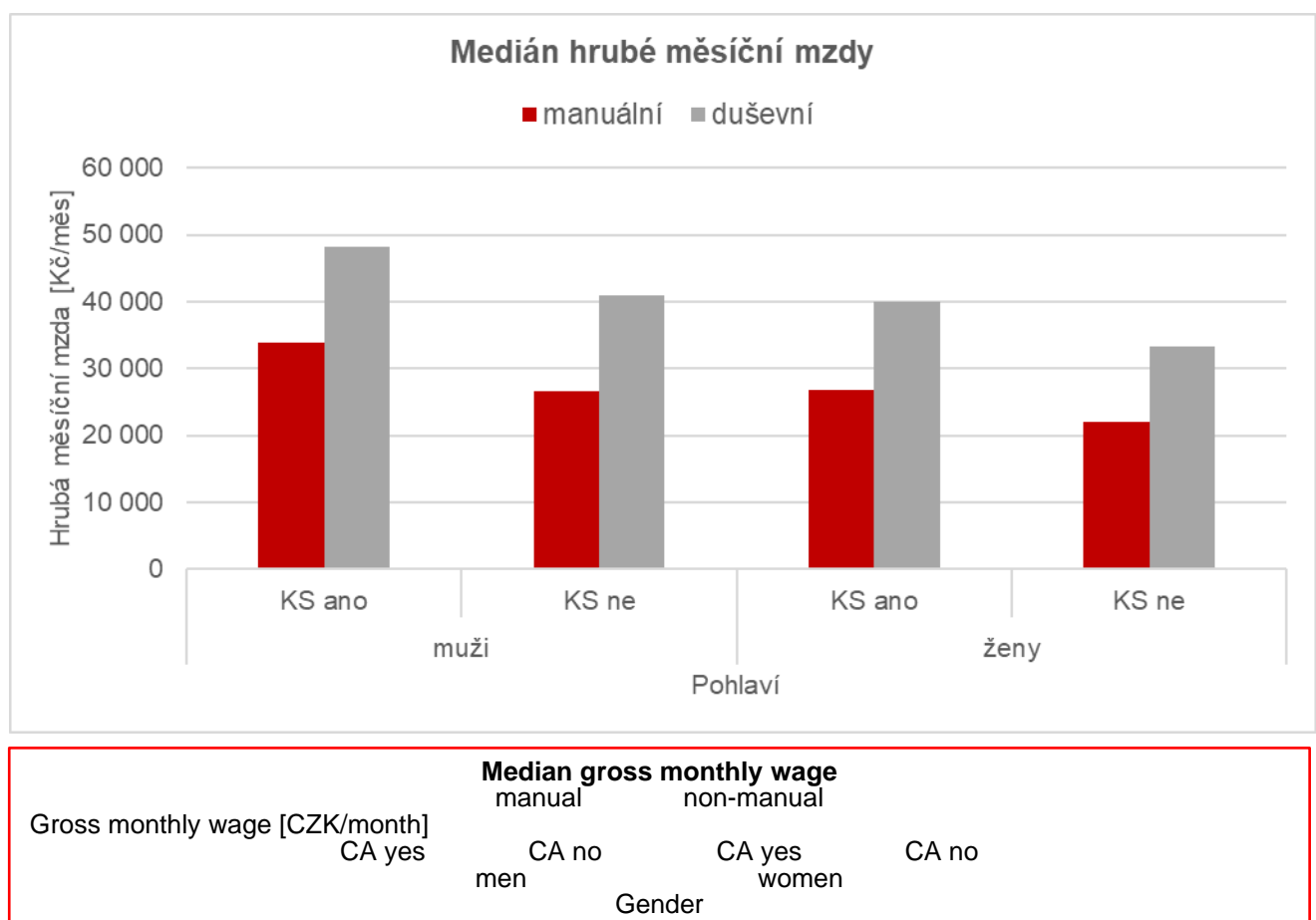
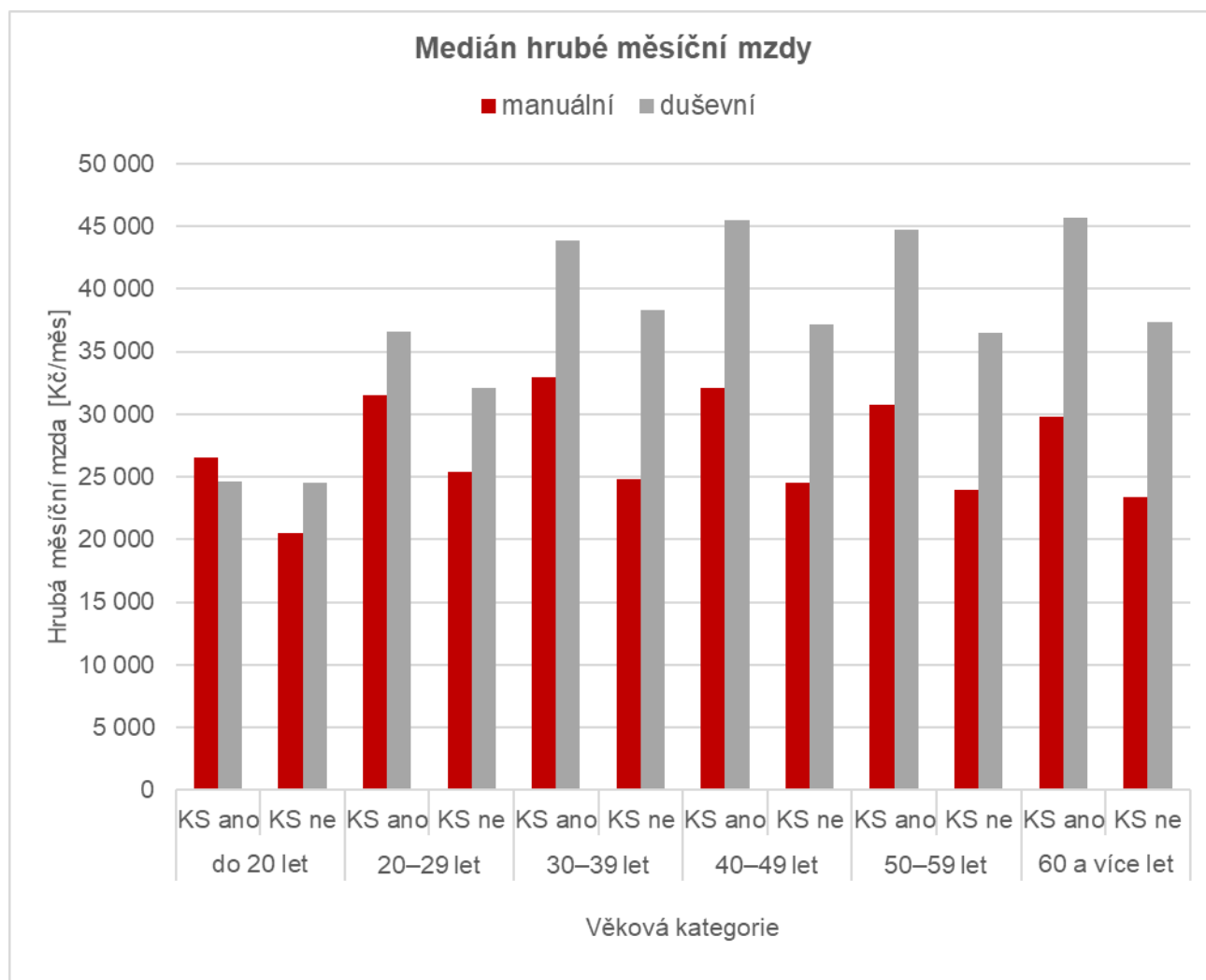


Figure 78 shows a comparison of the **median wage by age groups**. In all age groups, **manual and non-manual workers with a collective agreement have a higher median wage** than employees in companies without a collective agreement. **The highest median wage** is in non-manual workers in companies with a collective agreement **in the age group of 40–49 years and 60 years and over** with a median gross monthly wage of more than **CZK 45,000**. The lowest median gross wage is in manual workers without the protection of a collective agreement in the age group under 20 years (over CZK 20,000 per month).

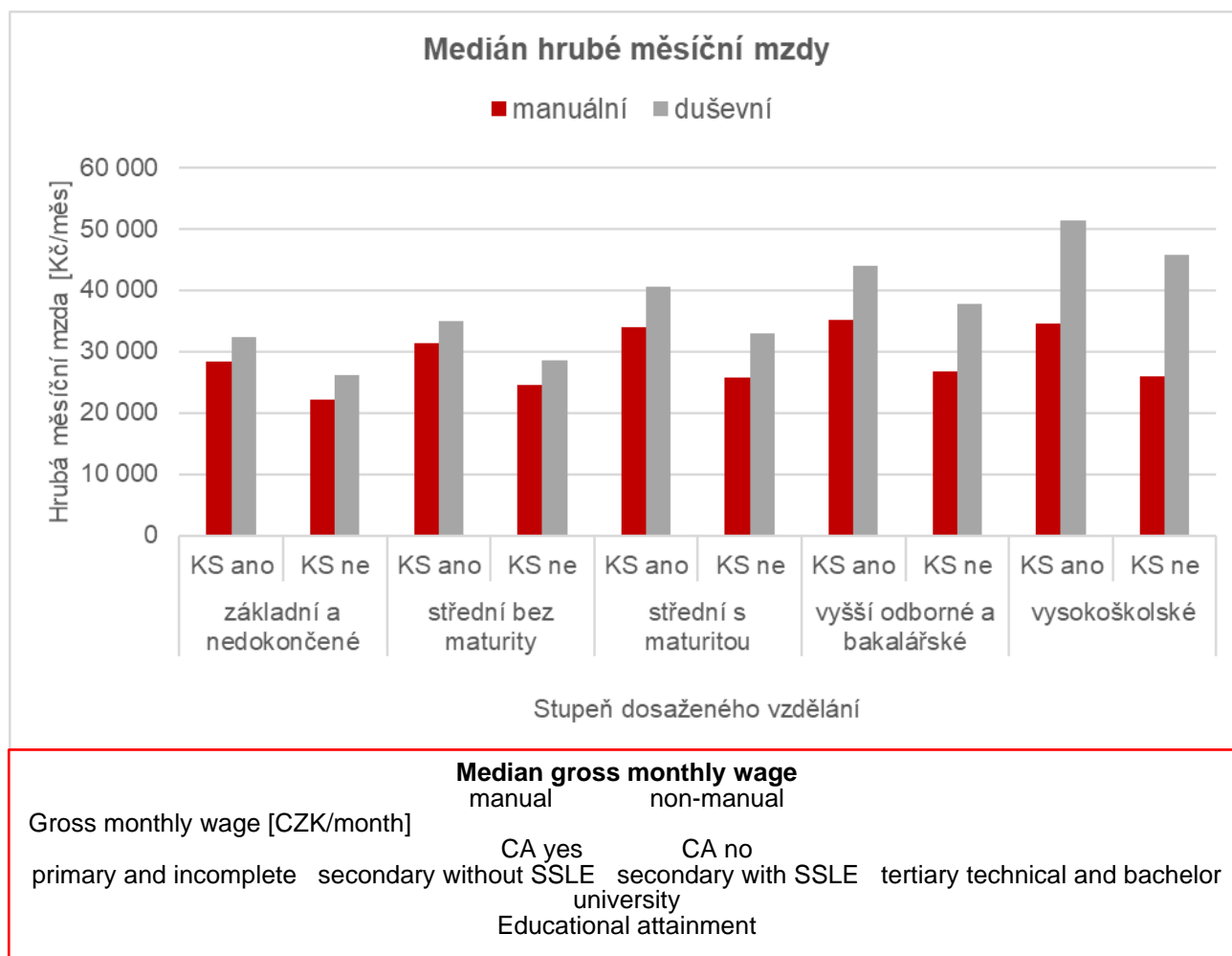
Figure 78: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and age in 2020



Median gross monthly wage	
Gross monthly wage [CZK/month]	
manual	non-manual
CA yes	CA no
under 20 yrs	20–29 yrs
30–39 yrs	40–49 yrs
50–59 yrs	60 yrs and over
Age group	

The results by **the level of educational attainment** are shown in Figure 79. At all levels of education, both manual and non-manual workers **with a collective agreement again have a higher median wage** than employees in companies without a collective agreement. We observe the **highest** median wage among **university-graduate non-manual workers** with a collective agreement in their company. The median value is more than **CZK 51,000 per month**. We observe the lowest wage in manual workers with primary education in companies that do not have a collective agreement. The median gross monthly wage for them is over CZK 22,000.

Figure 79: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and level of educational attainment in 2020



From the point of view of **citizenship**, it is again true that employees with Czech and foreign citizenship working in a company **with a collective agreement have a higher median wage** compared to employees without a collective agreement, as shown in Figure 80. **The highest** median wage is in **non-manual workers** in companies with a collective agreement and **citizenship other** than Czech (more than **CZK 48,000 per month**). The lowest median value in this group of employees are manual workers of foreign citizenship employed in companies without a collective agreement (less than CZK 23,000 per month).

Figure 81 summarizes the results **by sphere**. Manual and non-manual workers **under the protection of a collective agreement have higher earnings** in the wage and salary sphere. **The highest** median gross monthly wage is in **non-manual workers** with a collective agreement **in the wage sphere** (more than **CZK 44,000 per month**). The lowest median wage is reported in manual workers without a collective agreement also in the wage sphere (over CZK 24,000 per month).

Figure 80: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and citizenship in 2020

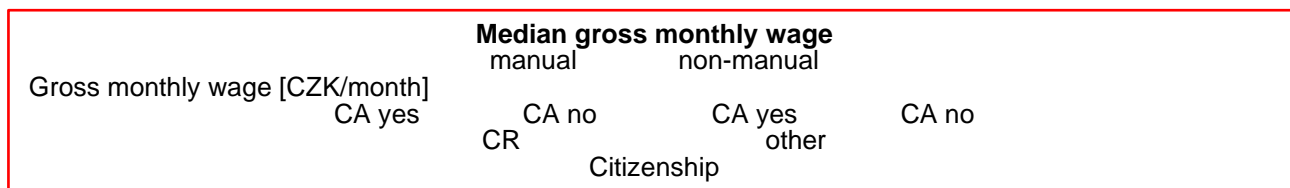
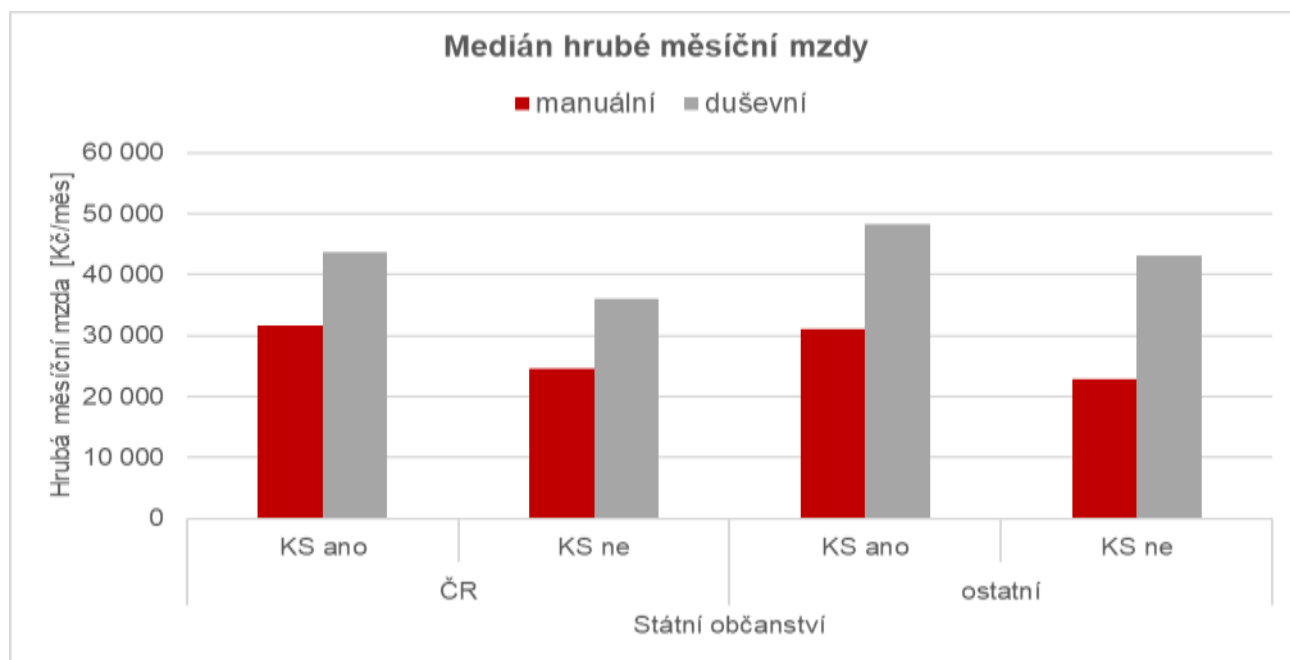
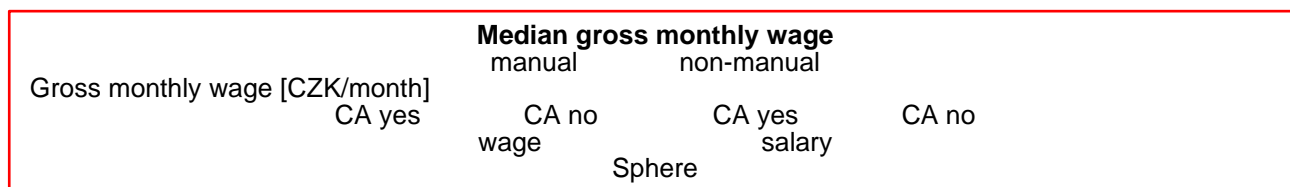
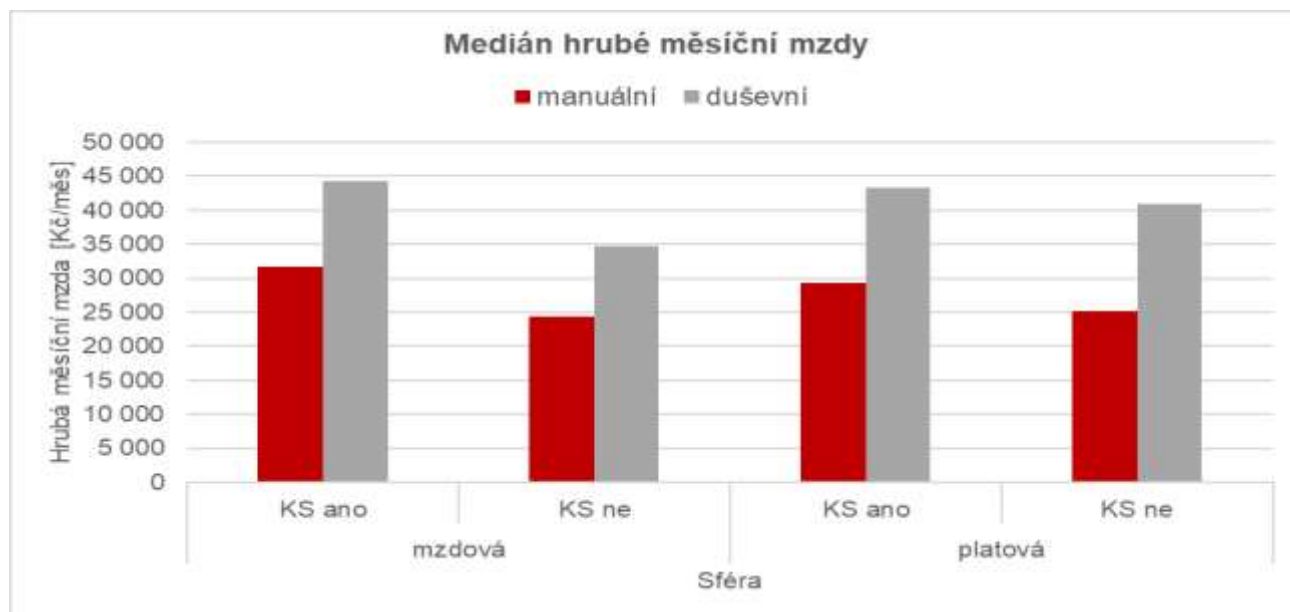
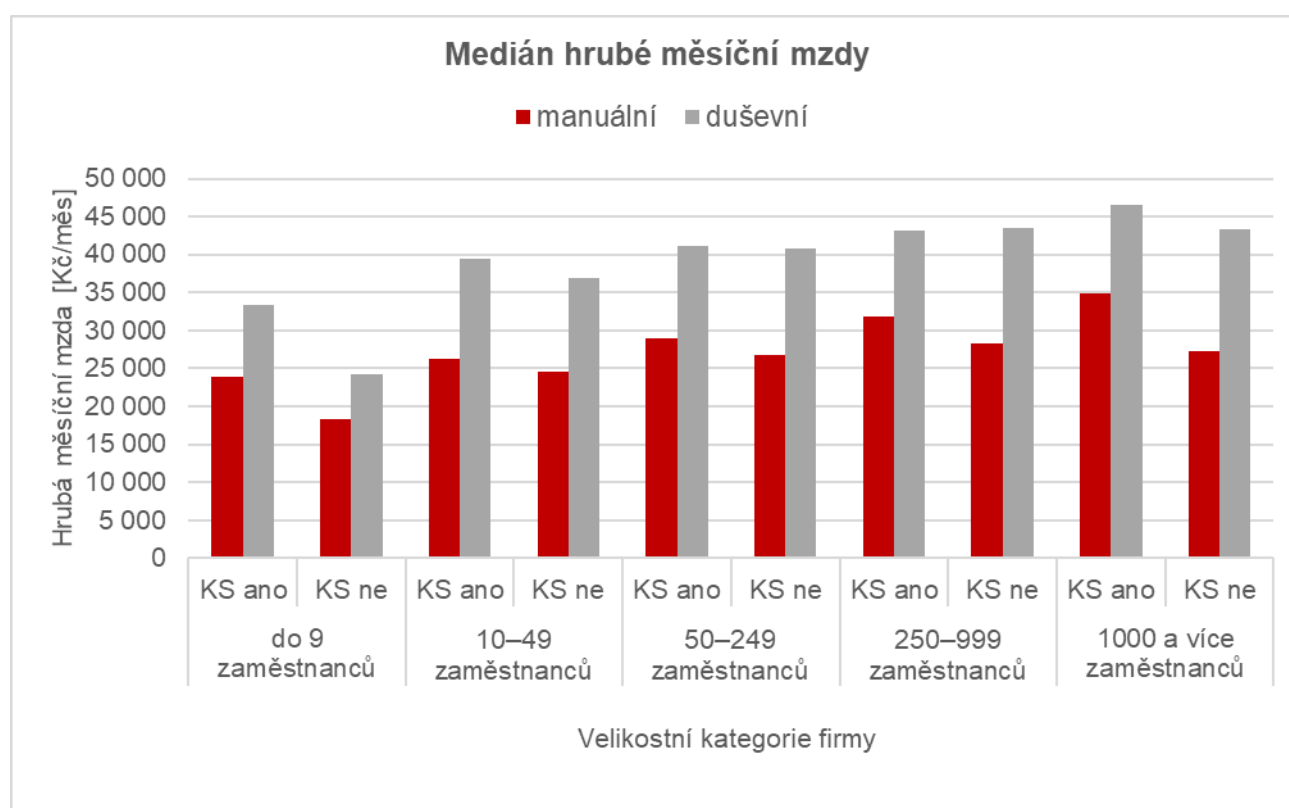


Figure 81: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and sphere in 2020



In terms of **size of employer** (Figure 82), the **highest earnings** can be observed in companies **with 1,000 or more employees**. The **highest** median value in these companies is in **non-manual workers** under the protection of a **collective agreement** (over **CZK 46,000 per month**). The lowest median value in terms of size is in manual workers without the protection of a collective agreement in small companies with up to 9 employees (over CZK 18,000 per month).

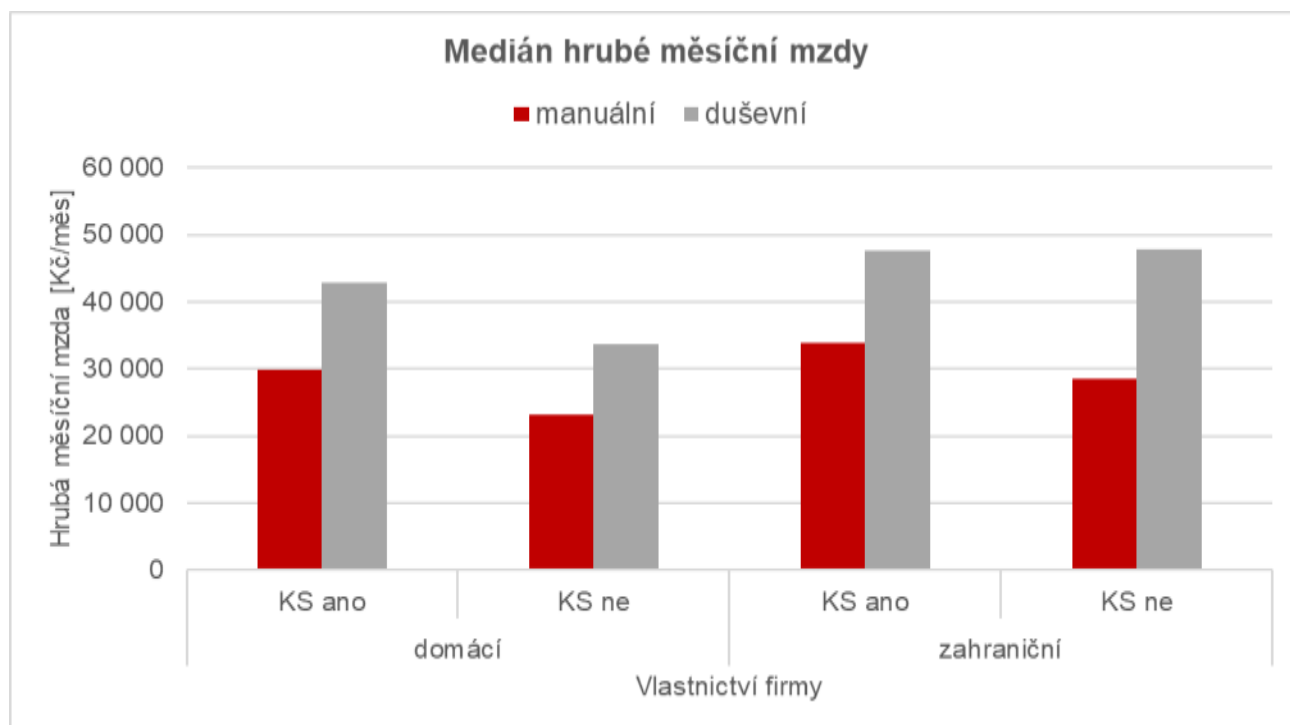
Figure 82: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and company size in 2020



Median gross monthly wage	
manual	non-manual
Gross monthly wage [CZK/month]	
CA yes	CA no
up to 9 employees	10–49 employees
50–249 employees	250–999 employees
1000 and more employees	
Company size category	

With regard to **domestic or foreign ownership**, the effect of a collective agreement on wages can be observed especially in domestic-owned enterprises. **Non-manual workers in foreign-owned enterprises** have a **comparable median wage**, regardless of whether they have a collective agreement or not. Their **median wage is the highest** of the compared groups and amounts to almost **CZK 48,000 per month**. On the contrary, according to Figure 83, manual workers in companies with a domestic owner and without the protection of a collective agreement have the lowest median (over CZK 23,000 per month).

Figure 83: Median gross monthly wage of manual and non-manual workers by existence of collective agreement and company ownership in 2020



Median gross monthly wage			
manual		non-manual	
Gross monthly wage [CZK/month]	CA yes	CA no	CA yes
	Domestic	foreign	CA no
	Company ownership		

3.3 Regression analysis

According to the results in the previous subchapters, it can be concluded that there is a relationship between the collective agreement and the monitored variables. In this part, these relationships will be confirmed or refuted using a more advanced statistical method, through regression analysis, which allows us to model the dependencies between variables. This method will be applied to variables affecting the amount of wage and hours paid, focusing mainly on the impact of a collective agreement.

Table 1 summarizes the results of the **impact of the existence of a collective agreement on the amount of wages** from 2016 to 2020. First, we look at the direction of action (positivity or negativity) of the impact of the existence of a collective agreement on the amount of wage. It can be confirmed that **manual workers under the protection of a collective agreement** are likely to receive a higher gross monthly wage compared to employees without the protection of a collective agreement. This **effect on wages is positive** and statistically highly significant. It can also be said that the **degree of this positive effect increases over time**. According to the results of the model, the existence

of a collective agreement increased the gross monthly wage by 2.7% in manual employees in 2020 compared to the wage of employees without a collective agreement. However, the situation is different for non-manual workers. In the period under review, the **effect of a collective agreement on the level of earnings of non-manual workers was mostly negative**. However, this negative effect **weakens over time** and the **effect on wages was already positive in the last monitored year (2020)**, as in the case of manual types of jobs. Compared to employees without a collective agreement, the existence of a collective agreement increased their wages by 0.7% in the year under review. While in 2017 and 2018 the impact on earnings was negative but statistically significant, it was positive in 2020 and also statistically significant at the 99% level of significance. However, 2020 was a specific period for labour market developments, mainly due to the measures in place against the spread of the coronavirus pandemic. The existence of collective agreements in companies could often contribute to the protection of employees, especially in the area of wage stability or even growth.

Complete output tables of regression models for manual and non-manual workers for 2020 are shown in Figure 84 and Figure 85. The regression output tables for the period from 2016 to 2019 are part of Annex 2.

Table 1: Impact of the existence of collective agreement on the amount of wages of manual and non-manual workers from 2016 to 2020 according to the regression model results

Year	MANUAL	NON-MANUAL
	collective agreement existence regression coefficient	
2020	+ 0.027***	+ 0.007***
2019	+ 0.026***	- 0.004*
2018	+ 0.017***	- 0.022***
2017	+ 0.009***	- 0.022***
2016	+ 0.003***	- 0.021 ^{SI}

Note: Asterisks indicate the statistical significance of the coefficient (*** = high statistical significance with p value ≤ 0.01 ; ** = medium statistical significance with p value ≤ 0.05 ; * = low statistical significance with p value ≤ 0.1 ; ^{SI} = statistically insignificant value with p value > 0.1).

Source: ISPV (MLSA), TREXIMA.

Table 2 shows the **impact of the existence of a collective agreement on hours paid** of manual and non-manual workers from 2016 to 2020. Let us remind you that the total hours paid include the time worked (including overtime) and the time not worked due to leave, holidays on otherwise working days, important obstacles on the part of the employee, etc. The difference in hours paid is significantly affected by the fact that employees under the protection of a collective agreement often have higher leave and higher overtime work (these

differences and their reasons were discussed in the previous subchapters). According to the regression analysis results, we observe a different effect of a collective agreement in manual and non-manual workers on hours paid. While the **hours paid are increasing in manual workers with a collective agreement**, the opposite is true for non-manual jobs. Manual workers under the protection of a collective agreement are thus more likely to have higher hours paid than employees who do not have a collective agreement in their company. **In the case of non-manual jobs, it can be said that employees under the protection of a collective agreement are more likely to have less hours paid** than employees who do not have a collective agreement. All results are statistically significant. The analysis of hours paid in the previous chapters showed that, on average, manual workers have higher hours paid compared to non-manual workers. In addition, the analysis in this section proves that the observed difference is also affected by the existence of a collective agreement and therefore the clearly different impact of collective bargaining on the working hours of manual and non-manual workers is confirmed.

Complete output tables of regression models for manual and non-manual workers for 2020 are shown in Figure 86 and Figure 87. The regression output tables for the period from 2016 to 2019 are part of Annex 2.

Table 2: Impact of the existence of collective agreement on hours paid of manual and non-manual workers from 2016 to 2020 according to the regression model results

Year	MANUAL	NON-MANUAL
	collective agreement existence regression coefficient	
2020	+ 0.013***	- 0.002**
2019	+ 0.012***	- 0.003***
2018	+ 0.016***	- 0.003***
2017	+ 0.013***	- 0.005***
2016	+ 0.008***	- 0.004***

Note: Asterisks indicate the statistical significance of the coefficient (***) = high statistical significance with p value ≤ 0.01 ; ** = medium statistical significance with p value ≤ 0.05 ; * = low statistical significance with p value ≤ 0.1 ; ^{SI} = statistically insignificant value with p value > 0.1).

Source: ISPV (MLSA), TREXIMA.

Figure 84: Dependence of gross monthly wage (ln) of manual workers on the existence of collective agreement and other variables in 2020

Linear regression		Number of obs = 1,049,214				
		F(49, 1049165) = 5217.52				
		Prob > F = 0.0000				
		R-squared = 0.4463				
		Root MSE = .25197				
In_wage	ln_mzda	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
collagr_c	kolasm_c					
collagr_yes	kolasm_ano	.0265428	.0020156	13.17	0.000	.0225922 .0304934
EDUCATION_c	VEDELANI_c					
Secondary without SSLE	Střední bez maturit	.0500824	.0027761	18.04	0.000	.0446414 .0555235
Secondary with SSLE	Střední s maturitou	.1020086	.0031498	32.41	0.000	.0959151 .1082621
Technical and bachelor	odborné a bakalářské	.1392213	.0079711	17.47	0.000	.1235982 .1548443
University	Vysokoškolské	.1224519	.0111871	10.95	0.000	.1005256 .1443793
	ČZISCO					
	5	.1504204	.0050915	29.56	0.000	.1405012 .1604595
	6	.1807718	.0116112	15.57	0.000	.1580143 .2035293
	7	.2358486	.0046708	50.49	0.000	.226694 .2450031
	8	.2027436	.0041687	48.63	0.000	.194573 .2109142
	9	.0329748	.0047773	6.90	0.000	.0236114 .0423382
industry_c	odvětví_c					
	B	.0284379	.0089129	3.19	0.001	.0109898 .0458861
	C	-.0207813	.0080023	-2.59	0.010	-.0365061 -.0050566
	D	.1292997	.0097713	13.23	0.000	.110148 .1484514
	E	-.0491583	.0084489	-5.82	0.000	-.0657172 -.0325995
	F	-.0483391	.0096681	-5.00	0.000	-.0672883 -.0293899
	G	-.0809722	.0089158	-9.08	0.000	-.098447 -.0634974
	H	-.074359	.0085529	-8.69	0.000	-.0911223 -.0575956
	I	-.1701472	.0127627	-13.33	0.000	-.1951618 -.1451327
	J	.0213997	.0252663	0.85	0.397	-.0281615 .0709589
	K	-.0553275	.0476488	-1.16	0.246	-.1487175 .0380626
	L	-.0779322	.0226939	-3.43	0.001	-.1234115 -.032453
	M	-.0876137	.0181912	-4.82	0.000	-.1232678 -.0519595
	N	-.2297082	.0091869	-25.00	0.000	-.2477143 -.211702
	O	.0701216	.0082149	8.54	0.000	.0540869 .0862364
	P	-.0488867	.0080964	-6.04	0.000	-.0647593 -.0330141
	Q	.0923543	.0083522	11.06	0.000	.0759963 .1087122
	R	-.0782429	.0108782	-7.28	0.000	-.1005638 -.055922
	S	-.1399997	.0126702	-11.05	0.000	-.1648288 -.1151626
gender	DOBRAH					
women	vek	.0023334	.0001636	14.27	0.000	.0020129 .002654
	vek	-.0007984	.0000908	-8.78	0.000	-.0009746 -.0006202
region	pohlaví					
Central Bohemian	ženy	-.1618308	.0018169	-89.42	0.000	-.1655878 -.1580737
South Bohemian	kraj					
Plzeň	Středočeský	.0783408	.0036588	19.79	0.000	.0705816 .0861
Karlovy Vary	Jihočeský	.0036628	.0048423	0.76	0.447	-.0058079 .0131735
Ústí nad Labem	Plzeňský	.0153512	.0040804	3.76	0.000	.0073837 .0233187
Liberec	Karlovarský	-.0238311	.0082568	-2.89	0.004	-.0400142 -.007648
Hradec Králové	Ústecký	-.0070098	.0047187	-1.49	0.137	-.0162583 .0022387
Pardubice	Liberecký	-.0135503	.0054879	-2.47	0.014	-.0243064 -.0027942
South Moravian	Královéhradecký	-.0020284	.0046856	-0.43	0.665	-.011212 .0071552
Vysočina	Pardubický	-.0408039	.0042047	-9.70	0.000	-.0490451 -.0325628
Olomouc	Jihomoravský	-.0201361	.0043472	-4.63	0.000	-.0286565 -.0116156
Moravian-Silesian	Vysočina	-.034222	.0053995	-6.34	0.000	-.0448047 -.0236392
Zlín	Olomoucký	-.0364272	.0049379	-7.38	0.000	-.0461053 -.0267492
	Moravskoslezský	-.0429094	.0034716	-12.36	0.000	-.0497136 -.0361052
	Žilinský	-.01167	.0044625	-2.62	0.009	-.0204164 -.0029236
	velKatVaz_HMH					
	10-49 zaměstnanců	.221831	.0062317	35.60	0.000	.209617 .234045
	50-249 zaměstnanců	.3150596	.0058855	53.53	0.000	.3035241 .3265951
	250-999 zaměstnanců	.3755763	.0059049	63.60	0.000	.3640028 .3871498
	1000 a více zaměstnanců	.4746189	.0061116	77.66	0.000	.4626404 .4865975
	_cons	9.798586	.0116692	839.70	0.000	9.775715 9.821457

Source: ISPV (MLSA). Data valid as of 11 May 2021.

Figure 85: Dependence of gross monthly wage (ln) of non-manual workers on the existence of collective agreement and other variables in 2020

Linear regression		Number of obs	=	1,346,659
		F(48, 1346610)	=	2993.52
		Prob > F	=	0.0000
		R-squared	=	0.4755
		Root MSE	=	.34553

ln_wzda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]
kolasm_c					
kolasm_ano	.0045912	.0020891	3.16	0.002	.0024967 .0106857
VIDELANI_c					
Střední bez maturity	.0344196	.0110527	3.11	0.002	.0127566 .0560826
Střední s maturitou	.167268	.0104756	15.97	0.000	.1467362 .1877998
Vyšší odborná a bakalářské	.2560718	.0107403	23.84	0.000	.2350212 .2771224
Vysokoškolské	.3584467	.0108086	33.18	0.000	.3374623 .3798311
CIISCO					
1	.5383346	.0058399	92.35	0.000	.5278887 .5507805
2	.2424163	.0037259	65.06	0.000	.2351136 .249719
3	.0997858	.0025717	39.58	0.000	.0939614 .1086102
4	-.0385937	.0045027	-8.57	0.000	-.0474189 -.0297686
5	.0030731	.0053559	0.57	0.566	-.0074242 .0135704
odvětví_c					
B	.1326733	.0173621	7.64	0.000	.0986441 .1667025
C	.1317325	.0147218	8.99	0.000	.1028783 .1605867
D	.2352163	.0150256	15.65	0.000	.2057666 .2646661
E	.0568619	.0181749	3.13	0.002	.0213398 .0925841
F	.0340515	.0167078	2.04	0.042	.0013047 .0667982
G	.1255977	.0156578	8.01	0.000	.0979059 .1532896
H	.0389059	.0133773	2.94	0.011	.0085553 .0691165
I	-.0684167	.0238761	-2.87	0.004	-.1152131 -.0216203
J	.2835762	.0187477	15.01	0.000	.2537111 .3144412
K	.2117844	.0153597	13.79	0.000	.1816788 .2418885
L	.1043925	.0271934	3.84	0.000	.0510944 .1576906
M	.1333616	.0165106	8.08	0.000	.1010015 .1657217
N	.0131192	.0177432	0.74	0.460	-.0216569 .0478933
O	.0417781	.0144928	2.88	0.004	.0133726 .0701835
P	.0293493	.0146142	2.01	0.045	.0007061 .0579926
Q	.2178041	.0149871	14.53	0.000	.1884288 .2471793
R	-.0491593	.015325	-3.21	0.001	-.0791958 -.0191228
S	-.0728026	.0198876	-3.64	0.000	-.1119776 -.0336276
DONAZAM	.0032343	.0002653	12.19	0.000	.0027143 .0037544
vek	.0032224	.0001713	18.81	0.000	.0028867 .0035582
pohlaví					
ženy	-.1535443	.0026472	-58.00	0.000	-.1587327 -.1483559
kraj					
Středočeský	-.0213859	.0058991	-3.66	0.000	-.03285 -.0099219
Jihočeský	-.0738667	.0062521	-11.81	0.000	-.0861206 -.0616128
Plzeňský	-.0503936	.0062561	-8.06	0.000	-.0626554 -.0381318
Karlovarský	-.0551989	.0128331	-4.30	0.000	-.0803513 -.0300466
Ústecký	-.0482747	.0063986	-7.64	0.000	-.0614158 -.0351336
Liberecký	-.0771457	.0073935	-10.43	0.000	-.0916368 -.0626547
Královéhradecký	-.0858097	.0065038	-13.19	0.000	-.098557 -.0730624
Pardubický	-.1052202	.0061881	-17.49	0.000	-.1203485 -.0900918
Jihomoravský	-.0869923	.0045809	-18.99	0.000	-.0959708 -.0780139
Vysočina	-.0975712	.0063605	-15.34	0.000	-.1100376 -.0851048
Olomoucký	-.1263682	.0063607	-19.87	0.000	-.138835 -.1139013
Horavskoslezský	-.1253743	.004757	-26.36	0.000	-.134698 -.1160507
Středočeský	-.1296694	.0040097	-32.38	0.000	-.1414481 -.1178907
velKatVaz_HMM					
10-49 zaměstnanců	.3531268	.0082748	42.68	0.000	.3369085 .3693451
50-149 zaměstnanců	.4460964	.0078602	56.70	0.000	.4306771 .4615190
150-999 zaměstnanců	.5053738	.0079312	63.72	0.000	.4898289 .5209188
1000 a více zaměstnanců	.5321988	.008135	65.41	0.000	.5162046 .5480931
_cons	9.692344	.0203123	477.17	0.000	9.652532 9.732155

Source: ISPV (MLSA). Data valid as of 11 May 2021.

Figure 86: Dependence of hours paid of manual workers on the existence of collective agreement and other variables in 2020

Poisson regression		Number of obs	=	1,049,214		
		Wald chi2(48)	=	12315.38		
Log pseudolikelihood = -1.225e+09		Prob > chi2	=	0.0000		
placodoba	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
kolmi_c						
kolmi_ano	.0129338	.0014203	9.11	0.000	.0101501	.0157174
VIDELANI_c						
Střední bez maturity	.0600866	.0024594	24.43	0.000	.0552663	.0649069
Střední s maturitou	.069541	.002645	26.29	0.000	.064357	.0747251
Vyšší odborné a bakalářské	.0484668	.0069502	6.94	0.000	.0347859	.0621476
Vysokoškolské	.0573365	.0066711	8.59	0.000	.0442615	.0704115
ČÍSLO						
5	-.0097318	.0037751	-2.58	0.010	-.0171309	-.0023326
6	-.0384278	.0092312	-4.16	0.000	-.0565207	-.020335
7	.0023796	.0033855	0.70	0.482	-.004256	.0090151
8	-.0043949	.0031557	-1.39	0.164	-.0105801	.0017902
9	-.0370424	.0038179	-9.70	0.000	-.0445253	-.0295594
odvátvi_c						
B	-.0751763	.0063867	-11.77	0.000	-.0876941	-.0626586
C	-.0584891	.0058371	-10.02	0.000	-.0699297	-.0470486
D	-.0629975	.0064805	-9.72	0.000	-.0756961	-.0502959
E	-.028078	.0064386	-4.36	0.000	-.0406575	-.0154985
F	-.0328885	.0065841	-5.00	0.000	-.0457932	-.0199838
G	-.0479525	.0063349	-7.57	0.000	-.0603688	-.0355363
H	-.0355927	.0061096	-5.83	0.000	-.0475673	-.0236181
I	-.0583626	.0110254	-8.92	0.000	-.079972	-.0367532
J	-.0459667	.009398	-4.89	0.000	-.0643865	-.027547
K	-.1844155	.0708723	-2.60	0.009	-.3233231	-.0455078
L	-.0336695	.0120926	-2.78	0.005	-.0573706	-.0099685
M	-.1044556	.0121602	-8.59	0.000	-.1282352	-.0806221
N	-.1723234	.0073321	-23.50	0.000	-.1866941	-.1579527
O	-.0332381	.0058905	-5.64	0.000	-.0447833	-.0216928
P	-.0122516	.0059946	-2.04	0.041	-.0240009	-.0005024
Q	-.0244962	.0060278	-4.06	0.000	-.0363104	-.012682
R	-.039136	.0089211	-4.39	0.000	-.054621	-.023651
S	-.0508076	.0098944	-5.13	0.000	-.0702003	-.0314149
DOBÁZAM	.0016923	.000114	14.84	0.000	.0014688	.0019158
vek	.0016102	.0000705	22.84	0.000	.001472	.0017484
pohlavi						
ženy	-.0576977	.0016758	-34.43	0.000	-.0609821	-.0544132
kraj						
Středočeský	.0138224	.0026386	5.24	0.000	.0086508	.018994
Jihočeský	.0142799	.0034601	4.13	0.000	.0074982	.0210616
Přerážský	.0109649	.0032081	3.42	0.001	.0046772	.0172526
Karlovarský	.0199378	.0055616	3.58	0.000	.0090374	.0308383
Ústecký	.0116878	.0036187	3.23	0.001	.0045952	.0187004
Liberecký	.0139221	.0042513	3.27	0.001	.0055898	.0222544
Královéhradecký	.0071055	.0034494	2.06	0.039	.0003478	.0138493
Pardubický	.0188635	.0030984	6.09	0.000	.0127908	.0249362
Jihomoravský	.0189092	.0028802	6.57	0.000	.0132642	.0245543
Vysočina	.0017432	.0037626	0.46	0.643	-.0056314	.0091177
Olomoucký	.0030021	.0038357	0.78	0.434	-.0045236	.0105279
Moravskoslezský	.0016608	.0024183	0.63	0.526	-.0034709	.0067926
Zlínský	.0081991	.0036288	2.26	0.024	.0010926	.0153055
velKatVar_MMM						
10-49 zaměstnanců	.0000685	.0044707	0.02	0.988	-.008694	.0088309
50-249 zaměstnanců	-.001092	.0043355	-0.25	0.801	-.0095894	.0074053
250-999 zaměstnanců	-.013263	.0043529	-3.05	0.002	-.0217946	-.0047315
1000 a více zaměstnanců	-.0235293	.0045057	-5.22	0.000	-.0323604	-.0146982
_cons	7.436913	.0085346	871.38	0.000	7.420185	7.453364

Source: ISPV (MLSA). Data valid as of 11 May 2021.

Figure 87: Dependence of hours paid of non-manual workers on the existence of collective agreement and other variables in 2020

Poisson regression		Number of obs = 1,346,859				
		Wald chi2(48) = 30251.90				
Log pseudolikelihood = -1.007e+09		Prob > chi2 = 0.0000				
placdoba	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolam1_c						
kolam1_ano	-.0020126	.0008401	-2.40	0.017	-.0036591	-.0003666
VIDELANI_c						
Střední bez maturity	.0578058	.0068462	8.44	0.000	.0443874	.0712241
Střední s maturitou	.0596148	.0066693	8.94	0.000	.0465431	.0726864
Vyšší odborné a bakalářské	.0538174	.0067785	7.94	0.000	.0405319	.0671103
Vysokoškolské	.0568646	.0067303	8.45	0.000	.0436735	.0700558
CZISCO						
1	-.0240383	.0016974	-14.16	0.000	-.0273652	-.0207113
2	-.0359151	.0014003	-25.65	0.000	-.0386595	-.0331705
3	-.0470944	.0011813	-39.87	0.000	-.0494096	-.0447791
4	-.0649289	.0020646	-31.45	0.000	-.0689764	-.0608833
5	-.0793013	.0026847	-29.54	0.000	-.0845632	-.0740393
odvětví_c						
B	-.0616311	.0063907	-9.64	0.000	-.0741566	-.0491056
C	-.0264881	.0050145	-5.28	0.000	-.0363163	-.0166598
D	-.0555194	.0053308	-10.41	0.000	-.0659675	-.0450712
E	-.0196579	.0060546	-3.25	0.001	-.0315246	-.0077911
F	-.0033108	.0057454	-0.58	0.564	-.0145716	.00795
G	-.013176	.0053498	-2.46	0.014	-.0236614	-.0026907
H	-.0283255	.0053922	-5.25	0.000	-.0385945	-.0177573
I	-.072629	.0129564	-5.61	0.000	-.0980232	-.0472349
J	-.0087174	.0053699	-1.62	0.105	-.0192423	.0018075
K	-.0239501	.0053403	-4.48	0.000	-.0344169	-.0134834
L	-.0419267	.0103281	-4.06	0.000	-.0621693	-.021684
M	-.0338292	.0057725	-5.86	0.000	-.045144	-.0225145
N	-.0666745	.0072015	-9.26	0.000	-.0807891	-.0525599
O	-.0019602	.0049699	-0.39	0.693	-.011701	.0077807
P	-.0384867	.0050028	-7.69	0.000	-.048292	-.0286814
Q	-.0155877	.0052311	-2.98	0.003	-.0258404	-.005335
R	-.0126923	.0057112	-2.22	0.026	-.0238859	-.0014986
S	-.0626177	.0083772	-7.47	0.000	-.0790366	-.0461988
DOBAZAM	.0019124	.0000914	20.92	0.000	.0017332	.0020915
vek	.0007888	.0000669	11.79	0.000	.0006577	.0009199
pohlavi						
ženy	-.0310622	.001026	-30.28	0.000	-.0330732	-.0290513
kraj						
Středočeský	.0039982	.0020504	1.95	0.051	-.0000204	.0080168
Jihočeský	.00726	.0026061	2.79	0.005	.0021522	.0123678
Plzeňský	.0059303	.0025126	2.36	0.018	.0010137	.0108629
Karlovarský	-.0024153	.0054696	-0.44	0.659	-.0131355	.0083049
Ústecký	.0054374	.0025668	2.12	0.034	.0004065	.0104682
Liberecký	.0046718	.0033833	1.38	0.167	-.0015593	.0113028
Královéhradecký	.0107638	.0024988	4.31	0.000	.0058662	.0156614
Pardubický	.0033977	.002736	1.25	0.213	-.0019453	.0087406
Jihomoravský	.0003234	.0019318	0.17	0.867	-.0034629	.0041097
Vysočina	.0044908	.0028016	1.60	0.109	-.0010001	.0099815
Olomoucký	.0018018	.0025664	0.70	0.483	-.0032281	.0068319
Moravskoslezský	-.0054465	.0020611	-2.64	0.008	-.0094866	-.0014072
Zlínský	.0022967	.002698	0.85	0.395	-.0029913	.0075847
velKatVaz_BHM						
10-49 zaměstnanců	.0056603	.0034	1.66	0.096	-.0010037	.0123242
50-249 zaměstnanců	.012191	.003256	3.74	0.000	.0058094	.0185726
250-999 zaměstnanců	.0067296	.003313	2.03	0.042	.0002362	.0132223
1000 a více zaměstnanců	.0021458	.0033605	0.64	0.523	-.0044406	.0087322
_cons	7.514961	.0093303	805.43	0.000	7.496674	7.533248

Source: ISPV (MLSA). Data valid as of 11 May 2021.

Conclusion

The aim of the study was to evaluate the **impact of collective bargaining on the position of manual and non-manual workers in the Czech labour market**. The study placed this issue in an international context.

The study showed that the differences between manual and non-manual workers are evident both in terms of their socio-economic characteristics and in terms of hours worked and their structure, as well as in the level of remuneration. Men are more likely to work as manual workers than women (64% of men and 36% of women). More than half of manual workers have secondary education without a SSLE. In terms of employment, the most numerous group of manual workers consists of employees in major groups of occupations 8 and 9 of the CZ-ISCO classification (plant and machine operators and assemblers and elementary occupations). Non-manual workers are more evenly distributed between men and women (47% of men and 53% of women). The most common education is secondary education with a SSLE and university education. The most numerous group in terms of employment consists of employees in major groups of occupations 3 and 2 of the CZ-ISCO classification (Technicians and associate professionals and professionals).

The earnings of manual workers are at a much lower level compared to non-manual workers. The median value of manual workers is less than CZK 28,000 per month and of non-manual workers almost CZK 40,000 per month. The difference between the medians is up to CZK 12,000 per month. The level of remuneration in men is always higher compared to women, whether they are manual or non-manual workers. With the increasing level of education, age or size of employer, the earnings of both groups of employees increase. We observe a higher level of wages for manual and non-manual workers in foreign-owned enterprises and they are more differentiated, especially upwards, in non-manual workers compared to domestic-owned companies.

The results of the study also show **differences in the structure of working time**. Non-manual workers have slightly higher hours worked, but in terms of overtime work, we observe a higher reported time for overtime work in manual jobs. On average, non-manual workers spend more time on leave than manual workers, but total absences are higher in manual jobs.

These distinctions defining differences in working conditions can also be observed at the **international level**. The second chapter showed that several factors currently affect the labour markets that impact the working conditions of most employees. With the changing needs of labour markets, the **number of workers in the services industry is expected to continue to grow**, while the share of employment **in agriculture** will continue in a long-term **downward trend**. Although total employment rate in the world continues to grow, individual areas of the economy are facing significant structural changes. As a result of the changes, **employment decreased** in entire sectors of the economy (**especially**

manufacturing), which caused a decrease in a large number of jobs. Other changes taking place in labour markets in advanced economies include the advancing polarization of labour. The **share of medium-skilled jobs has declined** in recent decades, while the share of workers in high- and low-skilled occupations has increased in most countries. These changes have led in particular to employment growth in high-skilled jobs. Specific jobs change in terms of their content, qualification requirements, responsibilities, independence or level of teamwork. Certain jobs are becoming redundant due to technological progress. Digitalization, robotics and artificial intelligence **reduce the demand for craft and related trades workers, plant and machine operators and assemblers or office workers**. There is a **growing demand for managers, professionals and technicians** and in some countries, for **auxiliary and unskilled labour**.

However, digitalization and robotics have **an impact** especially **on jobs** in which workers are **highly unionized**. Which is one of the reasons for the decline in total trade union involvement. Nevertheless, even in **an international comparison**, employees covered by **collective bargaining** have **more favourable working conditions** compared to other employees in the labour market. Through an analysis, the OECD study confirms that the presence of trade unions is associated with a lower workload of employees and a better quality of the working environment. Trade union representation can play an important role in improving the quality of employment, in particular by reducing work intensity and increasing education and career advancement possibilities.

The main output of the study is an analysis of the impact of collective bargaining on **manual and non-manual workers in the Czech Republic**. The results show **a clear positive effect of the existence of a collective agreement on the earnings of manual** and, in the last year, also **non-manual** workers. The existence of a collective agreement increased the gross monthly wage by 2.7% in manual workers in 2020 compared to the wage of employees without a collective agreement. However, the situation is more complicated in workers with a non-manual type of occupations. In the monitored period from 2016 to 2019, the effect of a collective agreement on the amount of wages in non-manual jobs was negative in comparison with workers who do not have a collective agreement in their company. However, the role of the collective agreement in this context is growing over time and the impact of the existence of a collective agreement on the wages of non-manual workers was already positive in the last monitored year 2020 in comparison with non-manual workers without a collective agreement. The labour market was significantly affected by the coronavirus crisis in 2020 and it can therefore be assumed that collective agreements that year contributed to more favourable working conditions for employees, especially in the area of wage developments.

As regards the impact of a collective agreement on the length of working hours, the results of the analysis show that **collective agreements for manual workers** clearly **increase hours paid** compared to employees without a collective agreement. The opposite is true of **non-manual types of jobs** and collective agreements **reduce the hours paid** of employees when compared to employees without a collective agreement.

All these findings should be taken into account by the social dialogue in collective bargaining. The study, based on the analysis of relevant data, confirmed the **existing differences in the working conditions of manual and non-manual workers** in the Czech labour market. The advancing digitalization, robotics and automation are changing the nature of the work of both groups of employees and the analysed data show the need to focus on vulnerable groups not only in determining wage developments, but also in social protection and discrimination prevention.

Annex 1 – Data Sources and Methodology

In order to examine the impact of collective bargaining on the differences in the position of manual and non-manual workers, structural wage statistics in the form of the Information System on Average Earnings (ISPV), the description of which is given in Part A of this chapter, were mostly used. Wage differentiation was shown in the study using box plots, the interpretation of which is described in Part B.

A. Structure of employees and wages

Data from the **Information System on Average Earnings** are used to analyse the structure of employees, the level of remuneration and the scope of working hours. The results of the ISPV survey (**structural statistics**) aim to provide the most detailed information on wages of individual employees and hours worked, classified by personality characteristics of employees (e.g. age, gender, educational attainment, occupation by the CZ-ISCO classification) and employer characteristics (e.g. branch of economic activity by CZ-NACE, size of economic entity, registered office of the entity). The main monitored indicators in terms of earnings level are gross monthly wage (salary) and hourly earnings. In addition to the differentiation of the gross monthly wage (salary), the components of the wage (salary) are also determined, i.e. remuneration, bonuses and allowances. For working hours, the level and structure of hours worked (e.g. overtime) and hours not worked (e.g. illness and leave) are monitored.

The ISPV contains data from a regular statistical survey, which is included in the program of statistical surveys published by the Czech Statistical Office in the Collection of Laws for the relevant calendar year under the title Quarterly Survey on Average Earnings. The Quarterly Survey on Average Earnings is **harmonized with the European Union's Structure of Earnings Survey** (see Commission Regulation (EC) No 1916/2000, as amended).

The results of the ISPV survey are differentiated according to the sphere they attest to. In the ISPV, economic entities are included in the **wage sphere**, which **remunerate with a wage** according to Section 109(2) of Act No 262/2006 Coll., the Labour Code, as amended. Economic entities that belong to the **salary sphere remunerate with a salary** according to Section 109(3) of Act No 262/2006 Coll., the Labour Code, as amended.

A detailed description of the ISPV and the results are published on www.ispv.cz.

B. Differentiation of indicators

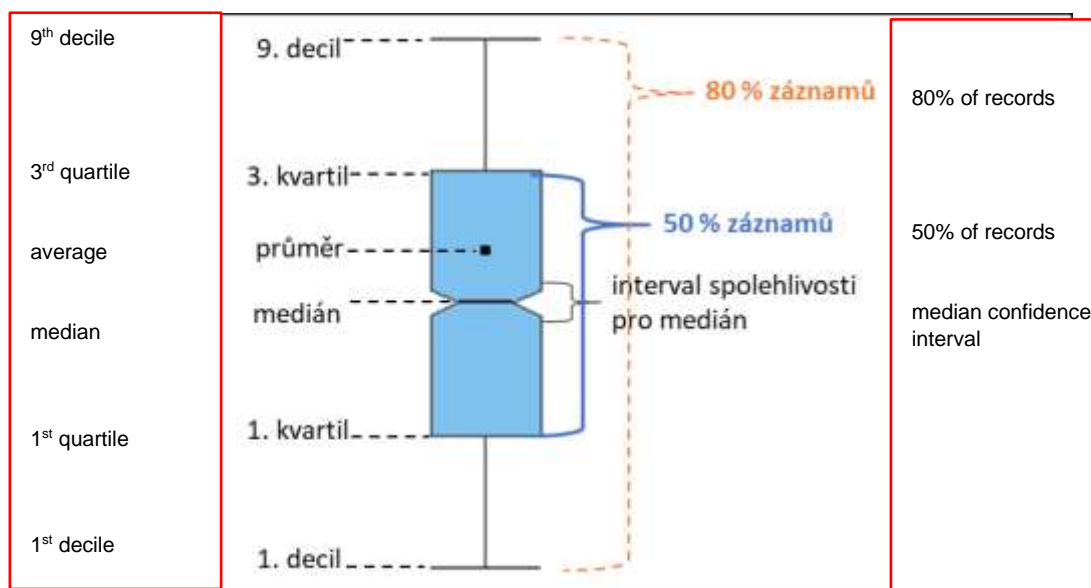
The differentiation of indicators is monitored using the following statistical characteristics:

- **Median.** A median is a value that divides an ordered series of numbers into two equally numerous halves. It is true that at least 50% of the values are less than or equal to and at least 50% of the values are greater than or equal to the median. The main advantage of the median as a statistical indicator is the fact that it is not affected by extreme values like the average;
- **Quartiles.** Quartiles are values that divide an ascending series of numbers into quarters. The **first quartile** is the value below which 25% of the lowest values of the ordered series are. The **third quartile** is the value above which 25% of the highest values of the ordered series are. The second quartile is equal to the median;
- **Deciles.** Deciles are values that divide an ascending series of numbers into ten parts. The **first decile** is the value below which 10% of the lowest values of the ordered series are. The **ninth decile** is the value above which 10% of the highest values of the ordered series are.

The confidence interval for the median is used to compare groups. If the notches of the two box plots do not overlap, this indicates that the medians are significantly different. The confidence intervals shown for the median correspond to a significance level of $\alpha = 0.05$, determining that the median is just that with a 95% probability.

The above statistical characteristics can be represented in the form of *box plots*. The description of a box plot is given in the figure below.

Figure: Interpretation of results shown in the form of box plots



Source: Own processing, TREXIMA.

Annex 2 – Tables

Table I: CZ-NACE sections

Industry group	CZ-NACE section
Agriculture	A Agriculture, forestry and fishing
Industry and construction	B Mining and quarrying
	C Manufacturing industry
	D Production and distribution of electricity, gas, heat and air conditioning
	E Water supply; sewerage, waste management and remediation activities
	F Construction industry
Services	G Wholesale and retail trade; repair of motor vehicles and motorcycles
	H Transport and storage
	I Accommodation and food service activities
	J Information and communication
	K Banking and insurance business
	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 Health and social services
	R Arts, entertainment and recreation
	S Other activities
	T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
	U Activities of extraterritorial organizations and bodies

Table II: Major groups of the CZ-ISCO occupation classification

CZ-ISCO major group	Name
0	Armed forces occupations
1	Legislators and managers
2	Professionals
3	Technicians and associate professionals
4	Officials
5	Service and sales workers
6	Skilled agricultural, forestry and fishery workers
7	Craft and related trades workers
8	Plant and machine operators and assemblers
9	Elementary occupations

Figure III: Dependence of gross monthly wage (ln) of manual workers on the existence of collective agreement and other variables in 2019

Linear regression		Number of obs	=	1,079,717
		F(48, 1079668)	=	5757.90
		Prob > F	=	0.0000
		R-squared	=	0.4499
		Root MSE	=	.2635

ln_mzda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
kolemi_c						
kolemi_ano	.0263202	.0021382	12.31	0.000	.0221294	.0305111
VZDELANI_c						
Střední bez maturity	.0574297	.0030107	19.08	0.000	.0515289	.0633305
Střední s maturitou	.1138348	.0034519	32.98	0.000	.1070492	.1206004
Vyšší odborné a bakalářské	.1577818	.0091782	17.19	0.000	.1397929	.1757708
Vysokoškolské	.1525907	.0125383	12.17	0.000	.1280161	.1771654
CIISCO						
5	.1592954	.0053383	29.84	0.000	.1488325	.1697582
6	.2137506	.0124671	17.15	0.000	.1893154	.2381857
7	.2746855	.0050373	54.53	0.000	.2648126	.2845584
8	.2342304	.0044848	52.23	0.000	.2254403	.2430206
9	.0490644	.0050677	9.68	0.000	.0391318	.0589971
odvětví_c						
B	.0460364	.0088313	5.21	0.000	.0287273	.0633455
C	-.0038849	.0083603	-0.46	0.642	-.0202708	.0125011
D	.100845	.0101611	9.92	0.000	.0809296	.1207603
E	-.0217713	.0089323	-2.44	0.015	-.0392784	-.0042642
F	-.0496449	.0104361	-4.76	0.000	-.0701193	-.0292106
G	-.0587535	.0093215	-6.30	0.000	-.0770233	-.0404836
H	-.0689651	.0089238	-7.73	0.000	-.0864754	-.0514948
I	-.1573845	.0121221	-12.98	0.000	-.1811434	-.1336255
J	.0061999	.0320914	0.19	0.847	-.0566982	.069098
K	-.0303225	.0469389	-0.65	0.515	-.1229211	.0616761
L	-.0220952	.0254187	-0.87	0.385	-.071915	.0277247
M	-.0703119	.0190812	-3.68	0.000	-.1077104	-.0329134
N	-.2547173	.0093107	-27.36	0.000	-.2729461	-.2364886
O	.0546385	.0085351	6.40	0.000	.0379099	.0713671
P	-.087111	.0084084	-10.36	0.000	-.1035912	-.0706308
Q	-.0059929	.0087244	-0.69	0.492	-.0230925	.0111068
R	-.0304239	.0109546	-2.78	0.005	-.0518945	-.0089533
S	-.1106849	.0128181	-8.64	0.000	-.135808	-.0855619
DOBAZAM						
vek	.002484	.0001917	14.00	0.000	.0023083	.0030597
	-.00101	.0000971	-10.40	0.000	-.0012003	-.0008197
pohlavi						
ženy	-.1682118	.0020187	-83.33	0.000	-.1721683	-.1642552
kraj						
Středočeský	.0702617	.0042634	16.48	0.000	.0619055	.0786178
Jihočeský	-.008102	.0052046	-1.53	0.125	-.0184598	.0022557
Plzeňský	.0140773	.0042836	3.29	0.001	.0056817	.022473
Karlovarský	-.0302853	.0079119	-3.83	0.000	-.0437924	-.0147783
Ústecký	-.0259709	.0051509	-5.04	0.000	-.0360665	-.0158754
Liberecký	-.0156731	.0057646	-2.72	0.007	-.0269715	-.0043747
Královéhradecký	-.0282782	.0049505	-5.71	0.000	-.037981	-.0165754
Pardubický	-.0649806	.0046214	-14.06	0.000	-.0740383	-.0559229
Jihomoravský	-.0362558	.004582	-7.91	0.000	-.0452363	-.0272753
Vysočina	-.070114	.005994	-11.70	0.000	-.081862	-.058366
Olomoucký	-.0525601	.0053395	-9.84	0.000	-.0630254	-.0420948
Moravskoslezský	-.0665918	.0036792	-18.10	0.000	-.073803	-.0593806
Středočeský	-.022553	.0047648	-4.73	0.000	-.0318919	-.0132141
velKatVar_HMM						
10-49 zaměstnanců	.2129649	.0068029	31.30	0.000	.1996315	.2262984
50-249 zaměstnanců	.3145429	.0044828	48.32	0.000	.3018378	.3272501
250-999 zaměstnanců	.3816462	.0064976	58.74	0.000	.368911	.3943813
1000 a více zaměstnanců	.4748256	.0067384	70.47	0.000	.4616187	.4880326
_cons	9.727942	.0124924	778.71	0.000	9.703457	9.752427

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure IV: Dependence of gross monthly wage (ln) of manual workers on the existence of collective agreement and other variables in 2018

Linear regression		Number of obs	=	1,049,230
		F(49, 1049181)	=	5213.67
		Prob > F	=	0.0000
		R-squared	=	0.4502
		Root MSE	=	.26547

ln_mzda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
kolmi_c						
kolmi_ano	.01729	.0024507	7.06	0.000	.0124968	.0220933
VIDELANI_c						
Střední bez maturity	.0701774	.0034642	20.26	0.000	.0633276	.0769673
Střední s maturitou	.1313951	.003943	33.32	0.000	.1236669	.1391232
Vyšší odborné a bakalářské	.1794152	.0101482	17.68	0.000	.1595251	.1993054
Vysokoškolské	.1847276	.013009	12.31	0.000	.1593105	.2141446
CIISCO						
5	.1517193	.005202	36.85	0.000	.1815235	.201915
6	.2379896	.0134909	17.64	0.000	.2115479	.2644314
7	.2963443	.0049432	59.95	0.000	.2866500	.3060389
8	.2670379	.0042801	62.39	0.000	.258649	.2754268
9	.0822976	.0049649	16.58	0.000	.0725666	.0920286
odvětví_c						
B	-.0041324	.0100679	-0.41	0.681	-.0239652	.0156005
C	.0092668	.0094424	0.98	0.326	-.0092402	.0277735
D	.1077506	.0112404	9.59	0.000	.0857190	.1297814
E	-.0201464	.0103072	-1.95	0.051	-.0403482	.0000555
F	-.0451948	.0116358	-3.88	0.000	-.0680006	-.022389
G	-.0516678	.0165419	-4.90	0.000	-.0732294	-.0301061
H	-.0607115	.0100047	-6.07	0.000	-.0803205	-.0411025
I	-.1465763	.0135844	-10.79	0.000	-.1732013	-.1199514
J	.0080342	.0335095	0.24	0.811	-.0576433	.0737116
K	-.0656602	.0346891	-1.30	0.193	-.1725491	.0415286
L	-.0151454	.0246062	-0.62	0.538	-.0633727	.033082
M	-.0285461	.020246	-1.41	0.159	-.0682276	.0111303
N	-.2648065	.0108379	-24.44	0.000	-.2861284	-.2436445
O	.0289597	.0096354	3.01	0.003	.0100748	.0478447
P	-.1313355	.009522	-13.79	0.000	-.1499984	-.1126726
Q	-.0235146	.0097687	-2.41	0.016	-.042661	-.0043682
R	-.0592375	.011998	-4.95	0.000	-.0827532	-.0357218
S	-.124478	.0142818	-8.72	0.000	-.1524698	-.0964862
DOBRAIAM						
vek	.0027721	.0002027	13.67	0.000	.0023747	.0031695
	-.0009485	.0001074	-8.83	0.000	-.0011591	-.0007379
pohlaví						
ženy	-.1737786	.0023626	-73.56	0.000	-.1784092	-.1691481
kraj						
Středočeský	.0834468	.0045265	18.44	0.000	.0745575	.0923186
Jihočeský	.0128114	.0061444	2.09	0.037	-.0007686	.0248542
Plzeňský	.0295564	.0046605	6.35	0.000	.0204618	.0387309
Karlovarský	-.0097743	.0088514	-1.10	0.269	-.0271229	.0075742
Ústecký	.0034248	.0058843	0.58	0.561	-.0081083	.0149579
Liberecký	-.010888	.0046013	-1.65	0.099	-.0238262	.0020503
Královéhradecký	-.0107117	.0035883	-1.92	0.055	-.0216587	.0002383
Pardubický	-.0394129	.0051133	-7.71	0.000	-.0494347	-.029391
Jihomoravský	-.0200134	.0049961	-4.01	0.000	-.0298056	-.0102212
Vysočina	-.0321066	.0063031	-5.09	0.000	-.0444604	-.0197529
Olomoucký	-.0353752	.005964	-5.93	0.000	-.0470645	-.023686
Moravskoslezský	-.0528877	.0043745	-12.09	0.000	-.0614614	-.0443139
Středočeský	-.0159132	.0054338	-2.93	0.003	-.0265633	-.0052631
velKatVar_RMM						
10-49 zaměstnanců	.2318239	.0073468	31.56	0.000	.2174248	.246223
50-149 zaměstnanců	.3132299	.0068463	45.75	0.000	.2998113	.3266484
150-999 zaměstnanců	.3781086	.006894	54.85	0.000	.3645965	.3916204
1000 a více zaměstnanců	.4728217	.0072061	65.61	0.000	.458699	.4869455
_cons	9.603761	.0139307	689.39	0.000	9.576497	9.631064

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure V: Dependence of gross monthly wage (ln) of manual workers on the existence of collective agreement and other variables in 2017

Linear regression		Number of obs	=	1,066,159
		F(48, 1066110)	=	6931.71
		Prob > F	=	0.0000
		R-squared	=	0.4283
		Root MSE	=	.27333

ln_mzda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
kolmml_c						
kolmml_ano	.0085191	.0022708	3.75	0.000	.0040683	.0129698
VIDELANI_c						
Střední bez maturity	.05935	.0032289	18.38	0.000	.0530215	.0656785
Střední s maturitou	.1229651	.003653	33.66	0.000	.1158054	.1301247
Vyšší odborné a bakalářské	.1728023	.0108109	15.98	0.000	.1516132	.1939913
Vysokoškolské	.1773686	.0148331	11.96	0.000	.1482962	.2064411
CIISCO						
5	.1329823	.004936	26.93	0.000	.1233041	.1426606
6	.2133672	.0125535	17.00	0.000	.1887628	.2379716
7	.235742	.0047781	53.52	0.000	.2443772	.2651068
8	.2257155	.0041312	54.64	0.000	.2176186	.2338124
9	.0451301	.0048072	9.39	0.000	.0357082	.0545519
odvětví_c						
B	.0527654	.0090487	5.83	0.000	.0350302	.0705005
C	.0073422	.008418	0.87	0.383	-.0091569	.0238412
D	.1084347	.010954	9.90	0.000	.0849651	.1299042
E	-.0314962	.0093384	-3.37	0.001	-.0497991	-.0131932
F	-.0495725	.0101604	-4.88	0.000	-.0694866	-.0296585
G	-.0685441	.009393	-7.30	0.000	-.086954	-.0501342
H	-.0817168	.0090126	-9.07	0.000	-.0993813	-.0640523
I	-.1454643	.0125013	-11.64	0.000	-.1699665	-.1209621
J	-.0261447	.0362493	-0.72	0.471	-.0971921	.0449027
K	-.088246	.0507211	-1.74	0.082	-.1876576	.0111656
L	-.0082053	.0265286	-0.31	0.757	-.0602023	.0437917
M	-.0381035	.0192926	-1.98	0.048	-.0759163	.0002906
N	-.2782115	.0096379	-28.87	0.000	-.2971015	-.2593214
O	-.0080675	.0085822	-0.94	0.347	-.0248883	.0087532
P	-.1489486	.0085184	-17.49	0.000	-.1656454	-.1322538
Q	-.0475721	.0087431	-5.44	0.000	-.0647083	-.0304359
R	-.0794723	.011704	-6.79	0.000	-.1024117	-.0565329
S	-.139995	.013802	-10.14	0.000	-.1670464	-.1129435
DOBRAAM						
vek	.0027915	.000195	14.32	0.000	.0024094	.0031736
	-.0009129	.0001004	-9.09	0.000	-.0011097	-.000716
pohlaví						
ženy	-.1860101	.002244	-82.89	0.000	-.1904082	-.181612
kraj						
Středočeský	.0566899	.0043259	13.10	0.000	.0482112	.0651685
Jihočeský	-.0174901	.005338	-3.28	0.001	-.0279524	-.0070279
Plzeňský	.0201649	.0043712	4.61	0.000	.0115975	.0287323
Karlovarský	-.0299112	.0082098	-3.64	0.000	-.0460022	-.0138203
Ústecký	-.0243564	.0053004	-4.60	0.000	-.0347451	-.0139677
Liberecký	-.0249048	.0066457	-3.75	0.000	-.0379301	-.0118795
Královéhradecký	-.0252058	.0053164	-4.74	0.000	-.0356258	-.0147858
Pardubický	-.069971	.0052271	-13.39	0.000	-.0802159	-.059726
Jihomoravský	-.0373187	.0049485	-7.54	0.000	-.0470176	-.0276198
Vysočina	-.0384172	.005824	-6.60	0.000	-.049832	-.0270025
Olomoucký	-.0462831	.0055279	-11.99	0.000	-.0571176	-.0354485
Moravskoslezský	-.0466432	.0037673	-17.69	0.000	-.074027	-.0192593
Středočeský	-.0160732	.0051661	-3.11	0.002	-.0261987	-.0059478
velKatVar_MMM						
10-49 zaměstnanců	.2103486	.0071373	29.47	0.000	.1963596	.2243375
50-249 zaměstnanců	.2934782	.0066337	44.24	0.000	.2804764	.30648
250-999 zaměstnanců	.3731749	.0066466	56.15	0.000	.3601478	.386202
1000 a více zaměstnanců	.466164	.006905	67.51	0.000	.4526303	.4796977
_cons	9.610575	.012508	769.35	0.000	9.586059	9.63509

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure VI: Dependence of gross monthly wage (ln) of manual workers on the existence of collective agreement and other variables in 2016

Linear regression		Number of obs	=	1,037,695		
		F(48, 1037646)	=	6889.15		
		Prob > F	=	0.0000		
		R-squared	=	0.4271		
		Root MSE	=	.27267		
ln_mzda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
kolasm_c						
kolasm_ano	.0030653	.0022767	1.35	0.178	-.0013969	.0075275
VZDELANI_c						
Střední bez maturity	.0587873	.0027637	21.27	0.000	.0533706	.0642041
Střední s maturitou	.1253944	.0032265	38.86	0.000	.1190706	.1317181
Vyšší odborné a bakalářské	.1678463	.0129857	12.93	0.000	.1423948	.1932979
Vysokoškolské	.2194607	.0148547	14.77	0.000	.1903459	.2485755
CIISCO						
5	.08495	.0045616	18.62	0.000	.0760095	.0938906
6	.2313064	.0125664	18.41	0.000	.2066786	.2559382
7	.2311335	.0046878	49.31	0.000	.2219455	.2403214
8	.2094643	.0039446	53.08	0.000	.2017303	.2171982
9	.0347317	.0048488	7.16	0.000	.0252282	.0442352
odvřtvi_c						
B	.0469454	.0096816	4.85	0.000	.0279699	.065921
C	.0046464	.0086359	0.54	0.591	-.0122797	.0215726
D	.1361962	.0093276	14.60	0.000	.1179144	.154478
E	-.0304179	.0093941	-3.24	0.001	-.04883	-.0120059
F	-.0425158	.0103625	-4.10	0.000	-.0628258	-.0222057
G	-.061888	.0090361	-6.85	0.000	-.0795984	-.0441775
H	-.0944515	.0089849	-10.51	0.000	-.1120616	-.0768415
I	-.2150928	.0117251	-18.34	0.000	-.2380736	-.192112
J	.0731601	.0183275	3.99	0.000	.0372389	.1090813
K	.0488472	.0190297	2.57	0.010	.0115496	.0861449
L	-.025856	.0186223	-1.39	0.165	-.0623552	.0106432
M	.0548913	.0145396	3.79	0.000	.0263941	.0833885
N	-.2982229	.0098751	-30.27	0.000	-.3182777	-.2795681
O	-.0024933	.0085479	-0.32	0.753	-.0194468	.0140602
P	-.1441498	.0083448	-17.27	0.000	-.1605053	-.1277943
Q	-.056734	.00861	-6.59	0.000	-.0736093	-.0398587
R	-.0628223	.0106966	-5.87	0.000	-.0837872	-.0418574
S	-.1799068	.0126211	-14.25	0.000	-.2046437	-.1551699
DORAZAM	.0040785	.0002802	14.56	0.000	.0035294	.0046276
vek	-.0009577	.0001219	-7.86	0.000	-.0011966	-.0007188
pohlavi						
ženy	-.2044098	.0020778	-98.38	0.000	-.2084821	-.2003374
kraj						
Středočeský	.0354511	.0044271	8.01	0.000	.0267741	.0441282
Jihočeský	-.0536415	.0050173	-10.69	0.000	-.0634753	-.0438078
Plzeňský	.01969	.0046109	4.27	0.000	.0106529	.0287272
Karlovarský	-.0554073	.0064433	-8.60	0.000	-.0680359	-.0427787
Ústecký	-.0422688	.0045657	-9.26	0.000	-.0512174	-.0333201
Liberecký	-.0091776	.0056667	-1.63	0.104	-.0202449	.0018897
Královéhradecký	-.057639	.0049422	-11.66	0.000	-.0673255	-.0479526
Pardubický	-.0638089	.0050317	-12.68	0.000	-.0736708	-.053947
Jihomoravský	-.0466346	.0047954	-9.72	0.000	-.0560334	-.0372358
Vysočina	-.0521591	.0046862	-11.13	0.000	-.0613439	-.0429742
Olomoucký	-.0556718	.0053907	-10.33	0.000	-.0662374	-.0451062
Moravskoslezský	-.0669046	.0037373	-17.90	0.000	-.0742286	-.0595797
Zlínský	-.0307996	.0047928	-6.43	0.000	-.0401933	-.0214059
velKatVas_HMM						
10-49 zaměstnanců	.2942736	.0126368	23.29	0.000	.2695059	.3190413
50-249 zaměstnanců	.3671353	.0125484	29.26	0.000	.3425408	.3917297
250-999 zaměstnanců	.4520799	.0127801	35.37	0.000	.4270314	.4771284
1000 a více zaměstnanců	.531464	.0130697	40.66	0.000	.5058479	.5570801
_cons	9.487658	.0156415	606.57	0.000	9.457001	9.518315

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure VII: Dependence of gross monthly wage (ln) of non-manual workers on the existence of collective agreement and other variables in 2019

Linear regression		Number of obs	=	1,359,979
		F(48, 1359930)	=	2782.78
		Prob > F	=	0.0000
		R-squared	=	0.4626
		Root MSE	=	.35501

ln_mzda	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolmml_c						
kolmml_ano	-.0039435	.002177	-1.81	0.070	-.0082102	.0003233
VZDELANI_c						
Střední bez maturity	.0406347	.0145186	2.80	0.005	.0121787	.0690906
Střední s maturitou	.1840631	.0140939	13.06	0.000	.1564396	.2116866
Vyšší odborné a bakalářské	.2706	.0143841	18.81	0.000	.2424076	.2987924
Vysokoškolské	.3841787	.014449	26.59	0.000	.3558591	.4124982
CEISCO						
1	.4841868	.0059543	81.32	0.000	.4725166	.495857
2	.2006649	.0039533	50.76	0.000	.1929167	.2084132
3	.0619566	.0031252	19.82	0.000	.0558316	.0680821
4	-.0831322	.0047061	-17.46	0.000	-.0923561	-.0739084
5	-.0558581	.005807	-9.62	0.000	-.0672396	-.0444767
odvětví_c						
B	.1406195	.0165287	8.51	0.000	.1082238	.1730151
C	.1542757	.0155307	9.93	0.000	.123836	.1847154
D	.2403115	.0158492	15.16	0.000	.2092476	.2713754
E	.0655996	.019634	3.34	0.001	.0271176	.1040816
F	.0456175	.0178371	2.56	0.011	.0106574	.0805776
G	.144875	.0165272	8.77	0.000	.1124823	.1772677
H	.0602545	.0162895	3.70	0.000	.0283275	.0921814
I	-.0734087	.0223934	-3.28	0.001	-.117299	-.0295184
J	.2605246	.0165554	15.74	0.000	.2280766	.2929725
K	.237603	.0162189	14.65	0.000	.2059144	.2693916
L	.1516046	.0280411	5.41	0.000	.096645	.2065642
M	.1471485	.0174676	8.42	0.000	.1129129	.181384
N	-.0328979	.0184301	-1.79	0.074	-.0690202	.0032244
O	.0284494	.0153186	1.86	0.063	-.0015745	.0584733
P	.0114773	.0154677	0.74	0.458	-.0183388	.0417934
Q	.1448407	.0157953	9.17	0.000	.1138824	.1757989
R	-.0141153	.016321	-0.86	0.387	-.0461039	.0178733
S	-.0659905	.0214355	-3.08	0.002	-.1080034	-.0239777
DOBAZAM	.0033127	.0002696	11.44	0.000	.0027451	.0038803
vek	.0035591	.0001815	19.61	0.000	.0032034	.0039148
pohlaví						
ženy	-.1642533	.0028002	-58.66	0.000	-.1697416	-.1587651
kraj						
Středočeský	-.0221366	.0061489	-3.60	0.000	-.0341882	-.010085
Jihočeský	-.0834909	.006643	-12.53	0.000	-.0945502	-.0704316
Plzeňský	-.0614286	.006224	-9.87	0.000	-.0736277	-.0492299
Karlovarský	-.0536035	.0117728	-4.55	0.000	-.0766778	-.0305291
Ústecký	-.0673527	.0069953	-9.63	0.000	-.0810634	-.0536421
Liberecký	-.0719813	.0075117	-9.58	0.000	-.0847039	-.0572587
Královéhradecký	-.1105407	.0065556	-16.86	0.000	-.1233894	-.097692
Pardubický	-.1217939	.0067025	-18.17	0.000	-.1349306	-.1086573
Jihomoravský	-.0994007	.0049828	-19.99	0.000	-.109367	-.0898344
Vysočina	-.1236491	.0066599	-18.57	0.000	-.1367023	-.1105959
Olomoucký	-.1332877	.0067404	-19.77	0.000	-.1464985	-.1200768
Moravskoslezský	-.132415	.0050346	-26.30	0.000	-.1422826	-.1225473
Středočeský	-.1466305	.0063751	-23.00	0.000	-.1592155	-.1341355
velKatVar_HMM						
10-49 zaměstnanců	.3192687	.0088449	36.10	0.000	.3019329	.3366045
50-249 zaměstnanců	.4241923	.0084006	50.50	0.000	.4077275	.4406572
250-999 zaměstnanců	.4931975	.0084648	58.26	0.000	.4766069	.5097882
1000 a více zaměstnanců	.5077312	.0086709	58.56	0.000	.4907366	.5247259
_cons	9.687121	.023345	414.96	0.000	9.641365	9.732876

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure VIII: Dependence of gross monthly wage (ln) of non-manual workers on the existence of collective agreement and other variables in 2018

Linear regression		Number of obs	=	1,307,007
		F(48, 1306958)	=	2442.84
		Prob > F	=	0.0000
		R-squared	=	0.4564
		Root MSE	=	.35673

ln_mda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
kolam1_c						
kolam1_ano	-.0220215	.002688	-8.21	0.000	-.0272801	-.016763
VIDELANI_c						
Střední bez maturity	.0553335	.0164454	3.36	0.001	.0230011	.0874659
Střední s maturitou	.1933887	.0160304	12.08	0.000	.1621697	.2250078
Vyšší odborné a bakalářské	.2779274	.0163306	17.02	0.000	.24592	.3099349
Vysokoškolské	.3948448	.0163904	24.09	0.000	.3627201	.4269695
CHISCO						
1	.4614252	.0066696	69.18	0.000	.448353	.4744975
2	.1869059	.0041884	44.62	0.000	.1786968	.195115
3	.0849848	.0032591	16.67	0.000	.0485203	.0614497
4	-.0839472	.0049656	-16.91	0.000	-.0936797	-.0742148
5	-.0809397	.0060021	-13.49	0.000	-.0927036	-.0691757
odvětví_c						
B	.1179442	.0184948	6.32	0.000	.0813037	.1545848
C	.1500911	.0177599	8.43	0.000	.1152039	.1849782
D	.2183034	.0181218	12.08	0.000	.1827854	.2538214
E	.0344004	.0217658	1.58	0.114	-.0082598	.0770606
F	.0537743	.020115	2.67	0.008	.0143496	.093199
G	.1344499	.0188033	7.15	0.000	.0975961	.1713037
H	.0432397	.0185029	2.34	0.019	.0069747	.0795046
I	-.0882833	.0254546	-3.47	0.001	-.1381734	-.0383932
J	.259942	.0186518	13.93	0.000	.2232851	.2965989
K	.2223292	.0185401	11.99	0.000	.1859912	.2586672
L	.1336629	.0283656	5.23	0.000	.0961073	.2112184
M	.1367168	.0194843	7.02	0.000	.0985279	.174905
N	-.0472489	.0205178	-2.30	0.021	-.087463	-.0070348
O	.0291368	.0174885	1.67	0.096	-.0051533	.0634053
P	-.0411914	.0176128	-2.34	0.019	-.0757119	-.006671
Q	.1234542	.0178834	6.90	0.000	.0884033	.158505
R	-.041411	.0184516	-2.24	0.025	-.0775756	-.0052465
S	-.0379757	.023381	-1.62	0.104	-.0838016	.0078502
DOBAZAH						
vek	.0032542	.0002984	11.01	0.000	.0026993	.0038691
	.0096992	.0001887	19.61	0.000	.0083294	.010469
pohlaví						
ženy	-.1700107	.0029239	-58.15	0.000	-.1757414	-.16428
kraj						
Středočeský	-.0164201	.0065489	-2.51	0.012	-.0282557	-.0035845
Jihočeský	-.0780757	.0074956	-10.42	0.000	-.0927669	-.0633846
Přehorský	-.0641836	.0063195	-10.16	0.000	-.0765697	-.0517975
Karlovarský	-.0480994	.0121633	-3.95	0.000	-.0719337	-.0242543
Ústecký	-.0578851	.0073099	-7.92	0.000	-.0722121	-.043558
Liberecký	-.0672698	.0091085	-7.39	0.000	-.0881232	-.0494174
Královéhradecký	-.1129875	.007103	-15.91	0.000	-.126909	-.0990659
Pardubický	-.1077772	.0072559	-14.85	0.000	-.1219984	-.093556
Jihomoravský	-.1016346	.0082325	-19.42	0.000	-.1118902	-.0913791
Vysočina	-.0953702	.0070878	-13.46	0.000	-.1092621	-.0814782
Olomoucký	-.1415925	.0071874	-19.70	0.000	-.1556796	-.1275054
Moravskoslezský	-.1343816	.0051626	-26.03	0.000	-.1445	-.1242631
Žilinský	-.14217	.0068287	-20.82	0.000	-.155554	-.128786
velKatVar_RHH						
10-49 zaměstnanců	.3263157	.0089198	36.58	0.000	.3088366	.3438007
50-249 zaměstnanců	.4325021	.0082663	52.32	0.000	.4163005	.4487037
250-999 zaměstnanců	.5052533	.0083074	60.82	0.000	.4889711	.5215355
1000 a více zaměstnanců	.5227744	.008565	61.04	0.000	.5059874	.5395615
_cons	9.42385	.0261912	367.45	0.000	9.372516	9.475183

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure IX: Dependence of gross monthly wage (ln) of non-manual workers on the existence of collective agreement and other variables in 2017

Linear regression		Number of obs	=	1,283,909
		F(48, 1283860)	=	2923.60
		Prob > F	=	0.0000
		R-squared	=	0.4542
		Root MSE	=	.36071

ln_msda	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
kolasm_o						
kolasm_ano	-.022446	.0025081	-8.95	0.000	-.0273618	-.0175309
VZDELANI_c						
Střední bez maturity	.0377017	.0142766	2.64	0.008	.009572	.0656834
Střední s maturitou	.1791787	.0138477	12.94	0.000	.1520377	.2063196
Vyšší odborné a bakalářské	.2559429	.0141884	18.04	0.000	.2281341	.2837517
Vysokoškolské	.3847125	.0141905	27.11	0.000	.3568997	.4125253
CIISCO						
1	.5039197	.0061141	82.42	0.000	.4919363	.515903
2	.2294308	.0038877	59.01	0.000	.221811	.2370506
3	.0956781	.0031256	30.61	0.000	.089552	.1018042
4	-.0392415	.0047312	-8.29	0.000	-.0485145	-.0299685
5	-.0467109	.0060364	-7.74	0.000	-.0585419	-.0348798
odvětví_c						
B	.1613027	.0177339	9.10	0.000	.1265448	.1960605
C	.157717	.0158541	9.95	0.000	.1266435	.1887904
D	.2323771	.016585	14.01	0.000	.1998711	.2648831
E	.0437394	.0191194	2.29	0.022	.0062661	.0812128
F	.0515659	.017826	2.89	0.004	.0166276	.0865041
G	.1386483	.0168464	8.23	0.000	.105627	.1716636
H	.0452062	.0166062	2.72	0.006	.0126587	.0777537
I	-.1007693	.0236257	-4.27	0.000	-.147075	-.0544637
J	.2767667	.0169097	16.37	0.000	.2436342	.3099093
K	.2333639	.0165002	14.14	0.000	.2010241	.2657037
L	.1639129	.0305683	5.36	0.000	.1040001	.2238258
M	.1326141	.0174461	7.60	0.000	.0984204	.1668078
N	-.0705991	.0191204	-3.69	0.000	-.1060744	-.0331238
O	.0098213	.0155782	0.63	0.528	-.0207119	.0403541
P	-.0741472	.0156936	-4.72	0.000	-.104906	-.0433883
Q	.104304	.01588	6.57	0.000	.0731798	.1354281
R	-.0750025	.0165141	-4.54	0.000	-.1073696	-.0426354
S	-.0479546	.0222063	-2.16	0.031	-.0914783	-.004421
DOBAZAM	.0034506	.0003073	11.23	0.000	.0028483	.004053
vek	.0038902	.0001794	21.69	0.000	.0035386	.0042418
pohlaví						
ženy	-.1755489	.002653	-66.17	0.000	-.1807487	-.1703492
kraj						
Středočeský	-.0453135	.0056964	-7.95	0.000	-.0564783	-.0341487
Jihočeský	-.0981173	.0065937	-14.88	0.000	-.1110407	-.0851939
Píseňský	-.0732384	.0058174	-12.59	0.000	-.0846403	-.0618365
Karlovarský	-.063063	.01054	-6.17	0.000	-.0857211	-.0444049
Ústecký	-.0936217	.0063433	-14.76	0.000	-.1060543	-.0811891
Liberecký	-.0796714	.0081015	-9.83	0.000	-.09555	-.0637928
Královéhradecký	-.1306436	.006474	-20.18	0.000	-.1433325	-.1179548
Pardubický	-.1190682	.0068124	-17.48	0.000	-.1324203	-.1057161
Jihomoravský	-.1066436	.0048643	-21.92	0.000	-.1161775	-.0971096
Vysočina	-.1117419	.007127	-15.68	0.000	-.1257106	-.0977732
Olomoucký	-.1618894	.0065424	-24.74	0.000	-.1747122	-.1490666
Moravskoslezský	-.1442176	.0047859	-30.13	0.000	-.1535978	-.1348373
Zlínský	-.1573664	.0063359	-24.84	0.000	-.1697845	-.1449483
velKatVaz_HMM						
10-49 zaměstnanců	.3159625	.0087843	35.97	0.000	.2987455	.3331794
50-249 zaměstnanců	.4230434	.0082315	51.39	0.000	.4069099	.4391768
250-999 zaměstnanců	.4981602	.0082999	60.02	0.000	.4818927	.5144277
1000 a více zaměstnanců	.5044155	.0085595	58.93	0.000	.4876382	.5211918
_cons	9.543911	.0233277	409.12	0.000	9.49919	9.589633

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure X: Dependence of gross monthly wage (ln) of non-manual workers on the existence of collective agreement and other variables in 2016

Linear regression		Number of obs	=	1,231,480
		F(48, 1231431)	=	3577.59
		Prob > F	=	0.0000
		R-squared	=	0.4437
		Root MSE	=	.38751

ln_mda	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolami_c						
kolami_ano	-.0207187	.0022906	-9.05	0.000	-.0252081	-.0162293
VEDELAMI_o						
Střední bez maturity	.0486684	.0127507	3.82	0.000	.0236775	.0736593
Střední s maturitou	.2073255	.012477	16.62	0.000	.1828705	.23178
Vyšší odborné a bakalářské	.28337	.0128383	22.07	0.000	.2582073	.3085326
Vysokoškolské	.4340866	.0128009	33.91	0.000	.4089972	.459176
CIISCO						
1	.5175715	.0061829	83.71	0.000	.5054532	.5296898
2	.2600364	.0034771	71.91	0.000	.2432214	.2668514
3	.124501	.0028458	43.89	0.000	.1193233	.1304788
4	.0007431	.0038516	0.19	0.847	-.006806	.0082922
5	-.0577473	.0052469	-11.01	0.000	-.0680311	-.0474636
odvětví_o						
B	.2213766	.018421	12.02	0.000	.185272	.2574812
C	.1877926	.016735	11.22	0.000	.1549925	.2205927
D	.2765391	.0172344	16.05	0.000	.2427802	.3103179
E	.0887335	.0191946	4.62	0.000	.0511122	.1263547
F	.055087	.0197243	2.79	0.005	.0164281	.093746
G	.189585	.0172209	11.59	0.000	.1558326	.2233374
H	.1011204	.0171637	5.89	0.000	.0674763	.1347645
I	-.1060182	.0221403	-4.79	0.000	-.1494124	-.0626241
J	.3555596	.0173817	20.46	0.000	.3215321	.3896671
K	.3111095	.016949	18.36	0.000	.27789	.344329
L	.1895584	.0268796	7.06	0.000	.1371753	.2425416
M	.1875174	.0175917	10.66	0.000	.1530383	.2219966
N	-.0106753	.0189831	-0.56	0.574	-.0478816	.0265309
O	.0431892	.016484	2.62	0.009	.0108812	.0754972
P	-.0450385	.0166703	-2.70	0.007	-.0777118	-.0123652
Q	.1309197	.0165032	7.93	0.000	.0988741	.1632654
R	-.0562466	.0171697	-3.28	0.001	-.0898966	-.0225946
S	-.019902	.0191999	-1.04	0.300	-.0576331	.0177291
DORAZAM	.0034269	.0002376	22.84	0.000	.0049612	.0058927
vek	.0038949	.0001475	26.40	0.000	.0036058	.0041841
pohlaví						
ženy	-.1942003	.0022307	-87.06	0.000	-.1985725	-.1898282
kraj						
Středočeský	-.0188787	.0044878	-4.21	0.000	-.0276747	-.0100827
Jihočeský	-.1252185	.0060213	-20.80	0.000	-.13702	-.1134171
Plzeňský	-.0616902	.0055409	-11.13	0.000	-.0725501	-.0508304
Karlovarský	-.0933048	.0080607	-11.58	0.000	-.1091036	-.0775061
Ústecký	-.1050633	.0049722	-21.13	0.000	-.1148087	-.095318
Liberecký	-.0837589	.0078396	-10.68	0.000	-.0991244	-.0683935
Královéhradecký	-.139566	.0055127	-25.32	0.000	-.1503707	-.1287613
Pardubický	-.1233495	.006103	-20.24	0.000	-.1355101	-.1111888
Jihomoravský	-.1070073	.0042418	-25.23	0.000	-.1153211	-.0986936
Vysočina	-.1105976	.0047593	-24.36	0.000	-.1238457	-.0973496
Olomoucký	-.1680161	.0059163	-28.40	0.000	-.1796118	-.1564203
Moravskoslezský	-.1405707	.0044076	-31.32	0.000	-.1493603	-.131779
Středočeský	-.1518661	.0055129	-27.35	0.000	-.1626712	-.1410609
velKatVar_HMM						
10-49 zaměstnanců	.2050567	.0154281	13.29	0.000	.1746182	.2352953
50-149 zaměstnanců	.2580029	.0130544	19.60	0.000	.2304967	.2855091
150-999 zaměstnanců	.3776227	.0150969	25.01	0.000	.3480334	.4072121
1000 a více zaměstnanců	.3681223	.0150999	24.38	0.000	.338527	.3977175
_cons	9.490045	.0269504	352.16	0.000	9.438023	9.543667

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XI: Dependence of hours paid of manual workers on the existence of collective agreement and other variables in 2019

Poisson regression		Number of obs	=	1,079,717		
		Wald chi2(48)	=	13407.15		
Log pseudolikelihood = -1.324e+09		Prob > chi2	=	0.0000		
placodoba	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolsmi_c						
kolsmi_ano	.0118104	.0013932	8.48	0.000	.0090799	.014541
VEDELANI_c						
Střední bez maturity	.0686216	.0025122	27.32	0.000	.0636978	.073545
Střední s maturitou	.0786212	.002698	29.14	0.000	.0733332	.0839092
Vyšší odborné a bakalářské	.0911728	.0071773	7.13	0.000	.0371058	.0652401
Vysokoškolské	.0446015	.0064727	9.98	0.000	.0519153	.0772877
CZISCO						
5	.0090147	.0036937	2.44	0.015	.0017753	.0162542
6	-.0065157	.0087325	-0.75	0.456	-.0236311	.0105996
7	.031534	.0033555	9.40	0.000	.0249573	.0381107
8	.0219014	.0031391	6.98	0.000	.015749	.0280539
9	-.0163742	.0037427	-4.37	0.000	-.0237098	-.0090385
odvětví_c						
B	-.0412535	.0059701	-10.26	0.000	-.0729548	-.0495523
C	-.0485083	.0056793	-8.54	0.000	-.0596396	-.037377
D	-.0423226	.0063288	-9.85	0.000	-.0747268	-.0499184
E	-.0171691	.0063089	-2.72	0.006	-.0255284	-.0088097
F	-.0266298	.0065592	-4.06	0.000	-.0394855	-.013774
G	-.0373542	.0061743	-6.05	0.000	-.0494556	-.0252528
H	-.0229138	.0059322	-3.86	0.000	-.0345407	-.0112869
I	-.0586003	.0093038	-6.30	0.000	-.0768353	-.0403652
J	-.0253185	.0088515	-2.86	0.004	-.0426671	-.0079699
K	-.1520282	.0620015	-2.45	0.014	-.2735458	-.0305046
L	-.0449891	.0125803	-3.54	0.000	-.0692461	-.0199321
M	-.0812633	.0117338	-6.93	0.000	-.1042612	-.0582655
N	-.1580056	.0068411	-23.10	0.000	-.1714139	-.1445973
O	-.0404741	.0057751	-7.01	0.000	-.0517931	-.0291552
P	-.0189726	.0058708	-3.23	0.001	-.030479	-.0074661
Q	-.0127372	.0059194	-2.15	0.031	-.024339	-.0011353
R	-.0348015	.0085571	-4.07	0.000	-.051573	-.018003
S	-.0330768	.0089845	-3.68	0.000	-.0506861	-.0154675
DOBAZAM	.0020998	.0001263	16.62	0.000	.0018521	.0023474
vek	.0016646	.0000698	23.85	0.000	.0015278	.0018014
pohlavi						
ženy	-.0496767	.0015864	-31.31	0.000	-.0527859	-.0465674
kraj						
Středočeský	.0119016	.0025994	4.58	0.000	.0068069	.0169962
Jihočeský	.0093163	.0033621	2.47	0.013	.0017266	.0149039
Plzeňský	.006908	.003045	2.27	0.023	.00094	.012876
Karlovarský	.0176265	.0050152	3.51	0.000	.0077968	.0274562
Ústecký	.0081313	.0036294	2.24	0.025	.0010179	.0152448
Liberecký	.0162791	.0040129	4.06	0.000	.0084139	.0241442
Královéhradecký	.0075994	.0032614	2.33	0.020	.0012071	.0139916
Pardubický	.0078364	.0032254	2.46	0.014	.0016146	.0142581
Jihomoravský	.0172182	.0026764	6.43	0.000	.0119727	.0224638
Vysočina	.0030561	.0036295	0.84	0.400	-.0040576	.0101690
Olomoucký	.0148618	.0036222	4.10	0.000	.0077624	.0219612
Moravskoslezský	-.0002619	.0029309	-0.10	0.918	-.0052219	.0046989
Zlínský	.0167616	.0033057	5.07	0.000	.0102826	.0232405
velKatVar_HMM						
10-49 zaměstnanců	.0211279	.0044755	4.72	0.000	.0123561	.0298996
50-249 zaměstnanců	.0093113	.0043427	2.14	0.032	.0007998	.0178229
250-999 zaměstnanců	.0043114	.0043522	0.99	0.321	-.0042187	.0128416
1000 a více zaměstnanců	-.0079505	.0044953	-1.76	0.079	-.0167156	.0009055
_cons	7.381932	.0085117	867.27	0.000	7.365249	7.398614

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XII: Dependence of hours paid of manual workers on the existence of collective agreement and other variables in 2018

Poisson regression		Number of obs		=	1,049,230	
		Wald chi2(48)		=	13380.56	
Log pseudolikelihood = -1.317e+09		Prob > chi2		=	0.0000	
placodoba	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolam1_c						
kolam1_and	.0159538	.0015775	10.11	0.000	.0128619	.0190456
VIDELANI_c						
Střední bez maturity	.0631697	.0028195	22.40	0.000	.0576437	.0686958
Střední s maturitou	.0722236	.0030139	23.96	0.000	.0663165	.0781307
Vyšší odborné a bakalářské	.0405336	.0078788	5.20	0.000	.0254934	.0563777
Vysokoškolské	.0512496	.0077757	6.61	0.000	.0360463	.0664533
CZISCO						
5	.0284619	.0036814	7.73	0.000	.0212465	.0356774
6	.0166187	.0095111	1.75	0.081	-.0020225	.0352598
7	.0421678	.0033475	12.60	0.000	.0356068	.0487288
8	.0310534	.0030617	10.14	0.000	.0250524	.0370543
9	-.0085272	.0037703	-2.34	0.019	-.0162169	-.0014375
odvětví_c						
B	-.0594602	.0069949	-8.50	0.000	-.0731699	-.0457504
C	-.0346792	.0065348	-5.31	0.000	-.0474872	-.0218712
D	-.0585832	.0073718	-7.95	0.000	-.0730317	-.0441346
E	-.0114541	.0074084	-1.57	0.116	-.0261743	.0032661
F	-.0171125	.0073959	-2.31	0.021	-.0316082	-.0026168
G	-.03438	.00709	-4.85	0.000	-.048276	-.0204839
H	-.0182625	.006836	-2.67	0.008	-.0316609	-.0048641
I	-.0530617	.0104248	-5.09	0.000	-.0734938	-.0326295
J	-.0275607	.0100333	-2.75	0.005	-.0476255	-.0082959
K	-.1973513	.0725447	-2.72	0.007	-.3395363	-.0551662
L	-.0230213	.0119812	-1.92	0.055	-.046504	.0004614
M	-.0673933	.0121873	-5.53	0.000	-.09128	-.0435066
N	-.1479056	.0077728	-19.03	0.000	-.1631399	-.1326712
O	-.0438211	.0066291	-6.61	0.000	-.056814	-.0308283
P	-.01571	.0067385	-2.33	0.020	-.0289173	-.0025027
Q	-.0017348	.006708	-0.26	0.796	-.0148823	.0114127
R	-.0127381	.0091597	-1.39	0.164	-.030683	.0052067
S	-.0151799	.0095985	-1.58	0.114	-.0339927	.0036329
DONAAM	.0022329	.0001313	17.01	0.000	.0019756	.0024902
vek	.0018871	.0000756	24.98	0.000	.001735	.0020382
pohlaví						
ženy	-.0497666	.0017342	-28.70	0.000	-.0531656	-.0463675
kraj						
Středočeský	.0141589	.0028156	5.03	0.000	.0086405	.0196773
Jihočeský	.0085322	.0037728	2.26	0.024	.0011376	.0159268
Plzeňský	-.0039858	.0032492	-1.23	0.220	-.0103542	.0023825
Karlovarský	.0090111	.0058247	1.55	0.122	-.0024051	.0204272
Ústecký	.0119984	.0038555	3.11	0.002	.0044417	.0195552
Liberecký	.0140607	.004242	3.31	0.001	.0057446	.0223768
Královéhradecký	.0104743	.0035823	2.92	0.003	.0034531	.0174955
Pardubický	.0137604	.0036497	3.77	0.000	.006607	.0209138
Jihomoravský	.0204018	.0025704	6.27	0.000	.0145798	.0262237
Vysočina	.010237	.0039911	2.56	0.010	.0024147	.0180593
Olomoucký	.0193677	.0040094	4.83	0.000	.0115094	.027226
Moravskoslezský	-.0007313	.002775	-0.26	0.792	-.0061702	.0047077
Žilinský	.0166303	.0037331	4.45	0.000	.0093135	.0239472
velKatVar_H001						
10-49 zaměstnanců	.0218386	.004672	4.67	0.000	.0126817	.0309956
50-249 zaměstnanců	.0156731	.0044001	3.56	0.000	.0076491	.0242971
250-999 zaměstnanců	.004609	.0044084	1.05	0.296	-.0040313	.0132493
1000 a více zaměstnanců	-.0143965	.0045915	-3.14	0.002	-.0233956	-.0053975
_cons	7.35131	.0094147	781.03	0.000	7.334678	7.371583

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XIII: Dependence of hours paid of manual workers on the existence of collective agreement and other variables in 2017

Poisson regression			Number of obs	=	1,066,159	
			Wald chi2(48)	=	17742.36	
Log pseudolikelihood = -1.303e+09			Prob > chi2	=	0.0000	
	placdoba	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]
	kolasm_c					
	kolasm_ano	.0131099	.0014466	9.06	0.000	.0102747 .0159481
	VEDELANI_c					
	Střední bez maturity	.0521191	.0023302	22.29	0.000	.0475363 .0567019
	Střední s maturitou	.0584076	.0025333	23.06	0.000	.0534423 .0633728
Vyšší odborné a bakalářské		.0299891	.0079348	3.78	0.000	.0144378 .0455403
Vysokoškolské		.0432658	.006732	6.43	0.000	.0300713 .0564603
	CZISCO					
	5	.0231347	.0032914	7.03	0.000	.0166836 .0295858
	6	.0136459	.0083329	1.64	0.102	-.0026864 .0299782
	7	.0428583	.0030072	14.25	0.000	.0369644 .0487523
	8	.0304968	.0027418	11.12	0.000	.0251236 .0358701
	9	-.0134823	.0033405	-4.04	0.000	-.0200286 -.006935
	odvětví_c					
	B	-.0615552	.0060456	-10.12	0.000	-.0734044 -.049706
	C	-.0413635	.0057012	-7.26	0.000	-.0525376 -.0301894
	D	-.0561294	.0064761	-8.67	0.000	-.0688222 -.0434365
	E	-.0105842	.0064544	-1.64	0.101	-.0232345 .0020661
	F	-.0313489	.0064064	-4.89	0.000	-.0439053 -.0187926
	G	-.0377512	.0061754	-6.11	0.000	-.0498548 -.0256476
	H	-.0240702	.0059466	-4.05	0.000	-.0357253 -.0124151
	I	-.0587538	.0087702	-6.70	0.000	-.0759432 -.0415644
	J	-.0505662	.0106282	-4.76	0.000	-.0713971 -.0297352
	K	-.2200202	.0689232	-3.19	0.001	-.3551071 -.0849333
	L	-.0360655	.0105611	-2.74	0.006	-.0515488 -.0205821
	M	-.059759	.0111977	-5.34	0.000	-.0817061 -.037812
	N	-.1719112	.0067488	-25.47	0.000	-.1851387 -.1586838
	O	-.0570321	.0057481	-9.92	0.000	-.0682983 -.045766
	P	-.0234886	.0058286	-4.03	0.000	-.0349125 -.0120647
	Q	-.0093353	.005865	-1.59	0.111	-.0208304 .0021598
	R	-.0119972	.0074925	-1.60	0.109	-.0266823 .0026878
	S	-.0239076	.0060027	-2.66	0.008	-.0415526 -.0062627
	DOBAZAM	.0023715	.0001124	21.10	0.000	.0021512 .0025918
	vek	.0019082	.0000671	28.45	0.000	.0017767 .0020397
	pohlaví					
	ženy	-.0438814	.0018102	-29.06	0.000	-.0468413 -.0409215
	kraj					
	Středočeský	.0167796	.0024748	6.78	0.000	.0119292 .02163
	Jihočeský	.0122638	.0031781	3.86	0.000	.0060349 .0184927
	Plzeňský	.0014336	.0028951	0.50	0.620	-.0042407 .0071078
	Karlovarský	.0197629	.0051826	2.08	0.038	.0006053 .0209206
	Ústecký	.0088198	.0033076	2.67	0.008	.002337 .0153025
	Liberecký	.0219467	.0037274	5.89	0.000	.0146411 .0292523
	Královéhradecký	.0205066	.0030929	6.63	0.000	.0144447 .0265685
	Pardubický	.0132783	.0032695	4.06	0.000	.0068702 .0196864
	Jihomoravský	.0225171	.0026569	8.47	0.000	.0173097 .0277245
	Vysočina	.0134573	.0037385	3.60	0.000	.00613 .0207846
	Olomoucký	.013818	.0035467	3.90	0.000	.0068666 .0207694
	Moravskoslezský	-.0004634	.0023341	-0.20	0.843	-.0050381 .0041114
	Zlínský	.023499	.0031229	7.52	0.000	.0173782 .0296198
	velKatVaz_HRM					
	10-49 zaměstnanců	.0224119	.0043318	5.17	0.000	.0139218 .030902
	50-249 zaměstnanců	.015636	.0041415	3.78	0.000	.0075188 .0237533
	250-999 zaměstnanců	.0072778	.0041776	1.74	0.081	-.0009102 .0154657
	1000 a více zaměstnanců	-.0116565	.0043431	-2.68	0.007	-.0201687 -.0031442
	_cons	7.366351	.0081994	898.40	0.000	7.350281 7.382422

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XIV: Dependence of hours paid of manual workers on the existence of collective agreement and other variables in 2016

Poisson regression		Number of obs	=	1,037,695		
		Wald chi2(48)	=	20610.96		
Log pseudolikelihood = -1.134e+09		Prob > chi2	=	0.0000		
placodoba	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolism_c						
kolism_ano	.0080097	.0013664	5.86	0.000	.0053317	.0106877
VIDELANI_c						
Střední bez maturity	.0452938	.0020581	22.01	0.000	.0412599	.0493277
Střední s maturitou	.0484209	.0022247	21.77	0.000	.0440605	.0527812
Vyšší odborné a bakalářské	.0294956	.0067653	4.36	0.000	.0162358	.0427554
Vysokoškolské	.0310615	.0060113	5.17	0.000	.0192762	.0428468
CZISC0						
5	.024959	.0030025	8.31	0.000	.0190741	.0308439
6	.0183603	.0080582	2.28	0.023	.0025665	.0341541
7	.0402172	.0028711	14.01	0.000	.03459	.0458444
8	.0364749	.0025559	14.27	0.000	.0314654	.0414844
9	-.0021465	.0031498	-0.69	0.496	-.0083201	.0040271
odvětví_c						
B	-.0743501	.0057616	-12.90	0.000	-.0856425	-.0630576
C	-.064501	.0055515	-11.62	0.000	-.0753817	-.0536202
D	-.0881108	.0061274	-14.38	0.000	-.1001202	-.0761014
E	-.0485608	.0062084	-7.34	0.000	-.057737	-.0334007
F	-.0543594	.0067017	-8.11	0.000	-.0674944	-.0412244
G	-.0612805	.0058215	-10.53	0.000	-.0726903	-.0498706
H	-.0506346	.0057391	-8.82	0.000	-.0618829	-.0393862
I	-.0714725	.0074357	-9.61	0.000	-.0860462	-.0568987
J	-.0683642	.0093169	-7.34	0.000	-.086625	-.0501033
K	-.0691613	.0110814	-6.24	0.000	-.0908805	-.0474421
L	-.0767943	.0114237	-6.72	0.000	-.0991843	-.0544043
M	-.0980982	.0091793	-10.36	0.000	-.1130894	-.077107
N	-.2074096	.0064814	-32.00	0.000	-.2201129	-.1947063
O	-.0981863	.0056619	-17.34	0.000	-.1092834	-.0870892
P	-.0472075	.0055533	-8.50	0.000	-.0580917	-.0363233
Q	-.0306579	.0055814	-5.49	0.000	-.0415972	-.0197187
R	-.0476546	.0068419	-6.97	0.000	-.0610645	-.0342447
S	-.0486575	.0081274	-5.99	0.000	-.0645869	-.0327281
DOBAZAM	.0031401	.0001475	21.29	0.000	.002851	.0034291
vek	.001543	.0000745	20.70	0.000	.0013969	.0016891
pohlaví						
ženy	-.0455693	.0013283	-34.31	0.000	-.0481727	-.0429658
kraj						
Středočeský	.0210412	.0023046	9.13	0.000	.0169244	.0251581
Jihočeský	.0045518	.0030453	1.49	0.135	-.0014169	.0105205
Plzeňský	.0018401	.0028989	0.63	0.526	-.0038415	.0075218
Karlovarský	.0068752	.0044641	1.54	0.124	-.0018743	.0156246
Ústecký	.003384	.0029397	1.15	0.250	-.0023778	.0091458
Liberecký	.0075903	.0034772	2.18	0.029	.0007781	.0144054
Královéhradecký	.0123748	.0031114	3.98	0.000	.0062766	.018473
Pardubický	.0101175	.002769	3.65	0.000	.0046903	.0155446
Jihomoravský	.0228016	.0025819	8.83	0.000	.0177412	.0278619
Vysočina	.0133313	.0028118	4.74	0.000	.0078202	.0188423
Olomoucký	.0132856	.0032286	4.12	0.000	.0069578	.0196135
Moravskoslezský	-.0015896	.0021907	-0.73	0.468	-.0058833	.0027041
Zlínský	.018723	.0030025	6.24	0.000	.0128382	.0246079
velKatVaz_BMM						
10-49 zaměstnanců	.0381574	.0077763	4.91	0.000	.0229162	.0533986
50-249 zaměstnanců	.0392001	.0077235	5.08	0.000	.0240624	.0543378
250-999 zaměstnanců	.0245266	.0078061	3.14	0.002	.009227	.0398262
1000 a více zaměstnanců	.0067211	.007923	0.85	0.396	-.0088078	.0222499
_cons	7.39583	.0101896	729.82	0.000	7.378859	7.415801

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XV: Dependence of hours paid of non-manual workers on the existence of collective agreement and other variables in 2019

Poisson regression		Number of obs = 1,359,979				
		Wald chi2(48) = 30638.71				
Log pseudolikelihood = -1.049e+09		Prob > chi2 = 0.0000				
placdobá	Coef.	Robust Std. Err.	z	P> z	[5% Conf. Interval]	
kolemi_c						
kolemi_and	-.0025468	.0008382	-3.04	0.002	-.0041897	-.0009039
VZDELANI_c						
Střední bez maturity	.0709268	.0087565	8.10	0.000	.0537645	.0880892
Střední s maturitou	.0749149	.0086531	8.66	0.000	.0579552	.0918745
Vyšší odborné a bakalářské	.0649419	.0087564	7.42	0.000	.0477796	.0821042
Vysokoškolské	.0692572	.0087181	7.94	0.000	.05217	.0863443
CZISCO						
1	-.0203033	.0016328	-12.43	0.000	-.0235035	-.0171031
2	-.0327421	.0014184	-23.08	0.000	-.035523	-.0299622
3	-.0397531	.0011854	-33.54	0.000	-.0420764	-.0374297
4	-.0566069	.0020577	-27.51	0.000	-.0606399	-.052574
5	-.0756995	.002619	-28.90	0.000	-.0808326	-.0705663
odvětví_c						
B	-.0587386	.0056234	-10.45	0.000	-.0697603	-.0477169
C	-.0235495	.0049191	-4.79	0.000	-.0331907	-.0139083
D	-.0630666	.005197	-12.14	0.000	-.0732824	-.0528507
E	-.0201069	.0060199	-3.34	0.001	-.0319058	-.0083081
F	-.0078116	.0057145	-1.37	0.172	-.0190117	.0033885
G	-.0139252	.0052458	-2.65	0.008	-.0242068	-.0036436
H	-.0296006	.0053151	-5.57	0.000	-.0400181	-.0191832
I	-.0331797	.0101187	-3.28	0.001	-.0530121	-.0133474
J	-.0185904	.0052883	-3.52	0.000	-.0289554	-.0082255
K	-.0269922	.0051946	-5.20	0.000	-.0371734	-.016811
L	-.0392316	.0102674	-3.82	0.000	-.0593753	-.0191278
M	-.0386831	.005609	-6.80	0.000	-.0488355	-.0275348
N	-.0774552	.0068023	-11.39	0.000	-.0907878	-.0641228
O	-.0007396	.0048736	-0.15	0.879	-.0102917	.0088128
P	-.0519788	.0049288	-10.47	0.000	-.0612331	-.0419245
Q	-.0138774	.0051613	-2.69	0.007	-.0239933	-.0037614
R	-.0211996	.0056211	-3.77	0.000	-.0322167	-.0101826
S	-.065567	.0082888	-7.91	0.000	-.0818127	-.0493213
DOBAZAH	.0022643	.0001093	20.72	0.000	.0020501	.0024785
vek	.000778	.000072	10.80	0.000	.0006368	.0009192
pohlavi						
ženy	-.0284367	.0010143	-28.04	0.000	-.0304247	-.0264487
kraj						
Středočeský	.0046932	.0020328	2.31	0.021	.000709	.0086774
Jihočeský	.0141448	.0028728	5.50	0.000	.0091027	.0191868
Plzeňský	.0093959	.0023969	3.92	0.000	.0046982	.0140937
Karlovarský	.0000226	.0047263	0.00	0.996	-.0092408	.009286
Ústecký	.0089596	.0025195	3.56	0.000	.0040218	.0138977
Liberecký	.0089487	.0033265	2.69	0.007	.0024289	.0154696
Královéhradecký	.007254	.0024949	2.91	0.004	.0023641	.0121439
Pardubický	.0065848	.0028328	2.32	0.020	.0010326	.0121371
Jihomoravský	.0008824	.0019629	0.45	0.653	-.0029447	.0047296
Vysočina	.0081748	.002766	2.96	0.003	.0027535	.0135961
Olomoucký	.007359	.0025564	2.88	0.004	.0023485	.0123695
Moravskoslezský	.0018429	.0020231	0.91	0.362	-.0021223	.0058081
Zlínský	.0081266	.0025446	3.19	0.001	.0031391	.013114
velKatVar_HMM						
10-49 zaměstnanců	.0171424	.0033785	5.07	0.000	.0105206	.0237642
50-249 zaměstnanců	.0152878	.0032751	4.67	0.000	.0088686	.021707
250-999 zaměstnanců	.0096175	.0033312	2.85	0.004	.0030884	.0161465
1000 a více zaměstnanců	.0068776	.0033811	2.03	0.042	.0002508	.0135045
_cons	7.489317	.0108921	687.59	0.000	7.467969	7.510665

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XVI: Dependence of hours paid of non-manual workers on the existence of collective agreement and other variables in 2018

Poisson regression		Number of obs	=	1,307,007		
		Wald chi2(48)	=	35783.80		
Log pseudolikelihood = -1.026e+09		Prob > chi2	=	0.0000		
placodba	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
kolsmi_c						
kolsmi_ano	-.0023589	.0009658	-2.65	0.008	-.0044518	-.0006661
VEDELANI_c						
Střední bez maturity	.0594994	.0096049	6.19	0.000	.0406741	.0783247
Střední s maturitou	.0582336	.009511	6.12	0.000	.0395923	.0768749
Vyšší odborné a bakalářské	.0508074	.0096317	5.28	0.000	.0319297	.0696852
Vysokoškolské	.0501476	.0095878	5.23	0.000	.0313559	.0689393
CIISCO						
1	-.0188379	.0017555	-10.56	0.000	-.0219787	-.0156972
2	-.0290131	.0016888	-19.53	0.000	-.0319252	-.0261009
3	-.0392382	.0012271	-31.98	0.000	-.0416434	-.0368331
4	-.0567194	.0021805	-26.37	0.000	-.0609294	-.0524995
5	-.0702284	.0027383	-25.65	0.000	-.0755954	-.0648613
odvětví_c						
B	-.0608316	.0060958	-9.98	0.000	-.0727792	-.048884
C	-.0164773	.0055733	-2.96	0.003	-.0274008	-.0055538
D	-.0531714	.0058999	-9.01	0.000	-.064735	-.0416077
E	-.0141202	.0067474	-2.09	0.036	-.0273449	-.0008956
F	-.0016175	.006316	-0.26	0.798	-.0139966	.0107616
G	-.010992	.0059485	-1.85	0.065	-.0226508	.0006668
H	-.0238581	.0059392	-4.02	0.000	-.0354988	-.0122175
I	-.0372392	.0114478	-3.25	0.001	-.0596765	-.014802
J	-.0113384	.0059011	-1.96	0.051	-.0231044	.0000276
K	-.021354	.0059461	-3.59	0.000	-.033008	-.0096999
L	-.0319955	.0110946	-2.88	0.004	-.0537405	-.0102505
M	-.0323505	.0062829	-5.15	0.000	-.0446646	-.0200363
N	-.0611107	.0075579	-8.09	0.000	-.0759239	-.0462975
O	.0116694	.0055184	2.11	0.034	.0008536	.0224953
P	-.0444988	.0055631	-8.00	0.000	-.0554022	-.0335954
Q	-.0044703	.0057344	-0.78	0.437	-.0157488	.0068082
R	-.0125421	.0062855	-2.00	0.046	-.0248615	-.0002226
S	-.0535027	.0091258	-5.86	0.000	-.0713989	-.0356164
DOBAZAH	.0032719	.0001108	20.51	0.000	.0020847	.002489
vek	.0009415	.000074	12.73	0.000	.0007965	.0010864
pohlavi						
ženy	-.0289214	.0010785	-26.82	0.000	-.0310352	-.0268076
kraj						
Středočeský	.0086638	.0021491	4.03	0.000	.0044517	.0128759
Jihočeský	.0126849	.0027928	4.54	0.000	.007211	.0181588
Plzeňský	.0095816	.0025088	3.81	0.000	.0046345	.0144687
Karlovarský	.0067767	.0050862	1.33	0.183	-.003192	.0167454
Ústecký	.0143491	.0026149	5.49	0.000	.0092239	.0194742
Liberecký	.0189101	.0032771	5.77	0.000	.0124871	.0253332
Královéhradecký	.0161062	.0025702	6.27	0.000	.0110686	.0211438
Pardubický	.009909	.003114	3.18	0.001	.0038057	.0160122
Jihomoravský	.0061126	.0020819	2.94	0.003	.0020322	.0101931
Vysočina	.0130128	.0030369	4.28	0.000	.0070605	.0189651
Olomoucký	.0081293	.0026631	3.05	0.002	.0029098	.0133488
Moravskoslezský	.0047479	.0021356	2.23	0.026	.0005663	.0089296
Zlínský	.0130586	.0027292	4.78	0.000	.0077095	.0184077
velKatVar_H2H						
10-49 zaměstnanců	.01564	.0034376	4.55	0.000	.0089024	.0223776
50-249 zaměstnanců	.0148837	.003297	4.51	0.000	.0084218	.0213457
250-999 zaměstnanců	.0059971	.0033533	1.79	0.074	-.0005752	.0125694
1000 a více zaměstnanců	.0035557	.0034184	1.04	0.298	-.0031442	.0102557
_cons	7.488717	.0119625	626.01	0.000	7.465271	7.512163

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XVII: Dependence of hours paid of non-manual workers on the existence of collective agreement and other variables in 2017

Poisson regression		Number of obs	=	1,263,905		
		Wald chi2(48)	=	32744.04		
Log pseudolikelihood = -9.737a+08		Prob > chi2	=	0.0000		
placdoaba	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
kolasm_c						
kolasm_ano	-.0053056	.0009138	-5.81	0.000	-.0070967	-.0035145
VZDELANI_c						
Střední bez maturity	.0356704	.0070622	5.05	0.000	.0218288	.0495312
Střední s maturitou	.0327637	.0069562	4.71	0.000	.0191299	.0463976
Vyšší odborné a bakalářské	.022777	.0070959	3.21	0.001	.0088692	.0366848
Vysokoškolské	.0242039	.0070341	3.44	0.001	.0104174	.0379904
CZISCO						
1	-.0129166	.0015802	-8.17	0.000	-.0160137	-.0098194
2	-.0236448	.001343	-17.61	0.000	-.0262771	-.0210125
3	-.0326878	.001122	-29.13	0.000	-.0348868	-.0304887
4	-.0506678	.0019087	-26.55	0.000	-.0544088	-.0469268
5	-.0702155	.0024871	-28.23	0.000	-.07509	-.0653409
odvãtvi_c						
B	-.050844	.005687	-8.94	0.000	-.0619904	-.0396976
C	-.0186958	.0090208	-3.72	0.000	-.0285364	-.0088551
D	-.058897	.0053155	-11.08	0.000	-.0693151	-.0484788
E	-.0115965	.0055681	-2.01	0.044	-.0236938	-.0002991
F	-.0041401	.0086594	-0.73	0.464	-.0152324	.0069522
G	-.0093408	.0053366	-1.75	0.080	-.0198002	.0011187
H	-.0237035	.0053393	-4.44	0.000	-.0341683	-.0132388
I	-.0405071	.0091025	-4.45	0.000	-.0583478	-.0226664
J	-.013611	.005339	-2.55	0.011	-.0240753	-.0031466
K	-.0270796	.0083279	-5.08	0.000	-.037822	-.0163372
L	-.0433119	.0109907	-3.94	0.000	-.0648533	-.0217706
M	-.0331338	.0056575	-5.86	0.000	-.044222	-.022045
N	-.0750387	.0067851	-11.65	0.000	-.0823343	-.0657371
O	.0096531	.004961	1.95	0.052	-.0000702	.0193764
P	-.0411657	.0049968	-8.24	0.000	-.0509592	-.0313722
Q	-.0049703	.0051539	-0.96	0.335	-.0150718	.0051312
R	-.0109413	.0055754	-1.96	0.050	-.021869	-.0000137
S	-.0549132	.0087005	-6.31	0.000	-.0719659	-.0378606
DOSAZAH	.0023534	.0001005	23.41	0.000	.0021564	.0025504
vek	.0008726	.0000662	13.19	0.000	.0007429	.0010023
pohlavi						
ženy	-.0290966	.0009559	-30.44	0.000	-.0309702	-.027223
kraj						
Středočeský	.0069481	.0018862	3.68	0.000	.0032513	.0106449
Jihočeský	.0105096	.0024637	4.27	0.000	.0056809	.0153384
Plzeňský	.0123306	.0021613	5.71	0.000	.0080944	.0165667
Karlovarský	.0063916	.0043001	1.49	0.137	-.0020365	.0148197
Ústecký	.0125828	.0022039	5.71	0.000	.0082632	.0169025
Liberecký	.0134752	.0031598	4.26	0.000	.0072821	.0196682
Královéhradecký	.0180377	.0022385	8.06	0.000	.0136502	.0224252
Pardubický	.0101896	.0027015	3.77	0.000	.0048947	.0154845
Jihomoravský	.0074061	.0018464	4.01	0.000	.0037872	.011025
Vysočina	.0143715	.0028621	5.02	0.000	.0087619	.0199811
Olomoucký	.01059	.0023644	4.48	0.000	.0059559	.0152242
Moravskoslezský	.0071079	.0018627	3.82	0.000	.0034572	.0107587
Zlínský	.0100586	.002391	4.21	0.000	.0053723	.014745
velKatVaz_RMH						
10-49 zaměstnanců	.0161139	.0032996	4.88	0.000	.0096469	.0225809
50-249 zaměstnanců	.0167773	.0031868	5.26	0.000	.0105313	.0230233
250-999 zaměstnanců	.007737	.0032409	2.40	0.016	.001433	.0141391
1000 a více zaměstnanců	.0077414	.0032966	2.35	0.019	.0012801	.0142026
_cons	7.510107	.0094844	791.84	0.000	7.491518	7.528696

Source: ISPV (MLSA). Data valid as of 11May2021.

Figure XVIII: Dependence of hours paid of non-manual workers on the existence of collective agreement and other variables in 2016

Poisson regression		Number of obs	=	1,231,480		
		Wald chi2(48)	=	29313.95		
Log pseudolikelihood = -8.392e+08		Prob > chi2	=	0.0000		
	placdobá	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
	kolasm1_c					
	kolasm1_ano	-.0039513	.0008714	-4.53	0.000	-.0056552 - .0022433
	VIDELANI_c					
	Střední bez maturity	.030638	.0056021	5.47	0.000	.0196581 .0416179
	Střední s maturitou	.0240417	.0054599	4.40	0.000	.01333405 .0347429
Vyšší odborné a bakalářské		.0140082	.0055599	2.52	0.012	.0031109 .0249055
Vysokoškolské		.0202065	.0054881	3.68	0.000	.00945 .0309629
	CZISCO					
	1	-.0052949	.001526	-3.47	0.001	-.0082859 - .0023004
	2	-.0120866	.0011899	-10.16	0.000	-.0144188 - .0097545
	3	-.0214429	.0010605	-20.22	0.000	-.0235216 - .0193643
	4	-.0332744	.0013649	-21.26	0.000	-.0363415 - .0302072
	5	-.0605183	.0023861	-25.36	0.000	-.0651949 - .0558417
	odvětví_c					
	B	-.054259	.0058979	-9.20	0.000	-.0658187 - .0426993
	C	-.0264248	.0053703	-4.92	0.000	-.0369505 - .0158992
	D	-.0626219	.0056175	-11.15	0.000	-.073632 - .0516118
	E	-.0222336	.0061309	-3.63	0.000	-.0342498 - .0102173
	F	-.0100033	.0065131	-1.54	0.125	-.0227689 .0027621
	G	-.0172088	.005511	-3.12	0.002	-.0280101 - .0064074
	H	-.0412374	.0055543	-7.42	0.000	-.0521237 - .0303511
	I	-.0312014	.0076615	-4.07	0.000	-.0462177 - .0161851
	J	-.0185422	.0055538	-3.34	0.001	-.0294275 - .0076569
	K	-.0253521	.0054739	-4.63	0.000	-.0360807 - .0146235
	L	-.0046645	.0081608	-0.57	0.568	-.0206593 .0113304
	M	-.0462161	.0056435	-8.19	0.000	-.0572778 - .0351544
	N	-.0873773	.0064693	-13.51	0.000	-.100057 - .0746976
	O	.0055076	.0053001	1.04	0.299	-.0048805 .0158956
	P	-.0431864	.0053015	-8.15	0.000	-.0535771 - .0327957
	Q	-.0096889	.0053388	-1.81	0.070	-.0201527 .0007749
	R	-.0172177	.0056987	-3.03	0.002	-.0283673 - .0060688
	S	-.0330531	.0072885	-4.53	0.000	-.0473383 - .0187679
	DOBAZAM	.0031096	.0001111	27.98	0.000	.0028918 .0033274
	vek	.0005907	.0000632	9.34	0.000	.0004668 .0007146
	pohlavi					
	ženy	-.0274818	.0007921	-34.65	0.000	-.0290343 - .0258293
	kraj					
	Středočeský	.0151706	.0014669	10.34	0.000	.0122954 .0180457
	Jihočeský	.0084497	.0021085	4.01	0.000	.0043172 .0125823
	Plzeňský	.0118811	.0020383	5.83	0.000	.0078861 .0158762
	Karlovarský	.0185909	.0027333	6.80	0.000	.0132336 .0239481
	Ústecký	.0108833	.0018717	5.81	0.000	.0072148 .0145517
	Liberecký	.0066093	.0028234	2.34	0.019	.0010756 .0121431
	Královéhradecký	.0118521	.0018746	6.32	0.000	.008178 .0155262
	Pardubický	.0118749	.0021143	5.62	0.000	.007731 .0160188
	Jihomoravský	.0136957	.0015136	9.05	0.000	.0107292 .0166623
	Vysočina	.0136319	.0021826	6.25	0.000	.0093542 .0179096
	Olomoucký	.005462	.0021111	2.59	0.010	.0013244 .0095996
	Moravskoslezský	.0070956	.0015352	4.62	0.000	.0040866 .0101046
	Zlínský	.016205	.0018998	8.57	0.000	.0125009 .019909
	velKatVar_MMM					
	10-49 zaměstnanců	.017124	.0038643	2.92	0.003	.0096302 .0246179
	50-249 zaměstnanců	.0193561	.0057962	3.34	0.001	.0079957 .0307166
	250-999 zaměstnanců	.0086386	.0038433	1.48	0.139	-.0028141 .0200913
	1000 a více zaměstnanců	.0062185	.0038845	1.06	0.291	-.0053148 .0177519
	_cons	7.516331	.0104311	720.57	0.000	7.495886 7.536775

Source: ISPV (MLSA). Data valid as of 11May2021.



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