

ANALYSIS

6 March 2023

Development on the Czech labour market in the Q4 2022

Culminating inflation is still an ultimate topic also on the labour market, where an increased price level decreased purchase power of wages of employees in real terms. The average wage decreased in real terms by 6.7%, year-on-year (y-o-y). A decrease of earnings in real terms affected all industries (economic activities), however, with a different intensity. Nevertheless, employment increased and the unemployment rate stagnated at 2.2%.

Employment, unemployment, and economic inactivity

Results of the Labour Force Sample Survey (LFSS) brought for the Q4 2022 a year-on-year increase of the employment by 45.2 thousand. The number of the employed thus increased by 1.0%. In the quarter-on-quarter (q-o-q) comparison, the employment increased by 37.7 thousand after seasonal adjustment. In the y-o-y increase of the number of working persons, an increase in the number of working females dominated again (by 30.1 thousand) and the whole increase was driven by the age group of 45–64 years (an increment by 45.3 thousand).

As for the self-employed without employees (own-account workers), the number of the employed increased by 26.5 thousand, y-o-y, whereas among the self-employed with employees there was a decrease by 9.8 thousand. The number of contributing family workers remained almost unchanged. The most considerable increase was in the largest group of employees (by 26.2 thousand); however, it was considerably weaker compared to the previous quarter.

The employment rate in the age group of 15–64 years increased by 0.6 percentage point (p. p.), year-on-year, to 75.8%. The male employment rate increased by 0.4 p. p. to 82.2%; it was more as for the female one by 0.8 p. p. to 69.0%. This trend is also confirmed by mirror data on the number of economically inactive persons. The number of economically inactive persons aged 15+ years decreased by 35.2 thousand, year-on-year, to 3 523.1 thousand, while the number of economically inactive females decreased by 27.8 thousand and the number of economically inactive males by 7.4 thousand. The number of non-working persons who do not comply with the condition to be classified as the unemployed, however, who are declaring that they are willing to work, further decreased by 13.3 thousand, y-o-y, to 50.0 thousand. The labour reserve was therefore strongly exhausted in Czechia.

The total number of the unemployed according to the LFSS (persons who seek a job in an active manner as defined by the International Labour Organisation (ILO)) reached 117.2 thousand persons, which was a slight year-on-year increase by 1.0 thousand; however, after seasonal adjustment, the numbers show a q-o-q decrease by 9.5 thousand persons. Therefore, the unemployment rate in the age group of 15–64 years stagnated, y-o-y, at 2.2%. As for comparison of Regions, the highest unemployment rate was in the *Moravskoslezský* Region (4.2%), followed by the *Karlovarský* Region (3.9%) and the *Ústecký* Region (3.2%). On the contrary, the lowest

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unemployment rate within Czechia was in the *Jihočeský* Region (1.2%). The unemployment rate decreased the most in the *Pardubický* Region (by 1 p. p. to 1.3%).

26.9% of the unemployed (31.5 thousand) were looking for a job for over a year; the number of the long-term unemployed thus considerably decreased by 22.0 thousand, year-on-year.

It has to be reminded that the LFSS practice in the field only covers persons living in dwellings (flats), not those living in hostels and similar collective households, which has a negative influence on the capture of working activity of foreigners who often use such ways of housing. The LFSS is a sample survey in households, which is weighted and grossed up to the data of demographic statistics of the Czech Republic, while population weights have not included refugees from the war in Ukraine, yet.

Registered number of employees expressed as full-time equivalent employees

A year-on-year increase in the registered number of employees by 34.8 thousand (0.9%) can seem to be low in the light of an inflow of refugees from Ukraine. It can be explained by the fact that they are often employed upon agreements on work performed out of employment relationship. It is also necessary to realise that it is a full-time equivalent of employees and a huge number of women with children were only able to work part time. On the other hand, there was probably also a decrease of employees coming from other countries (Romania, Bulgaria).

As for individual industries (economic activities), the situation was very heterogeneous. In nine sections of the CZ-NACE the number of employees decreased, in the remaining ten it increased; in total, it was ranging from -3.4% up to 9.0%. The relatively highest increase can be found again in the fourth smallest section of 'real estate activities'; when expressed as an absolute number, it is only an increase by 3.9 thousand jobs. A more important increase in the number of employees was in 'information and communication' by 5.2%, because it was by 6.7 thousand jobs. This economic activity has been increasing for a long-term and currently it got to the total amount of 137.0 thousand. Thus it was higher than 'accommodation and food service activities' with the amount of 109.3 thousand; there we can find the third most considerable relative increase by 3.6%, which was 3.8 thousand when expressed as an absolute number.

However, two most important increases as for the absolute number were in other economic activities as follows: 'education' became more numerous by 10.3 thousand jobs and 'human health and social work activities' by 9.3 thousand; in relative expression, it was by 3.2% and 2.9% more, respectively, with regards to the size of those sections of the CZ-NACE classification.

A considerable absolute increase by 6.4 thousand can also be found in 'wholesale and retail trade; repair of motor vehicles and motorcycles'; this section is the second largest, it employs over half a million people (517.5 thousand jobs). 'Professional, scientific and technical activities' increased the number of their employees by 5.5 thousand (3.2%), by which they got to 174.9 thousand.

And now let's have a look at the second group of sections, in which numbers of employees were decreasing, namely in the total by 11.9 thousand. There are two main contributors to the

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decrease. 'Manufacturing' is still the biggest section; it currently employs 1 092.4 thousand employees; however, there was a decrease by 3.4 thousand (0.3% in relative expression), year-on-year. Concurrently, Table 1 from the News Release on average wages shows us CZ-NACE divisions of this section, which are the most important as for the number of employees. Currently, an increase in the number of employees can only be found in 'manufacture of electrical equipment' (1.4 thousand, 1.5%). As for 'manufacture of motor vehicles, trailers and semi-trailers', there was a significant decrease (-3.5 thousand; -2.1%); despite that, it remains to be the biggest division of Czech manufacturing with 166.6 thousand jobs.

The second highest decrease in the number of employees was in 'public administration and defence; compulsory social security', in which there was a y-o-y decrease in the number of jobs by 3.2 thousand, which is a 1.1% decrease.

With a margin, there is a decrease in the number of jobs in 'agriculture, forestry and fishing' (1.9 thousand; 2.0%). In 'other service activities', there was a decrease by 1.6 thousand jobs, which is a relative decrease by 3.4%. In 'administrative and support service activities', there was a decrease by a thousand employees, year-on-year (or 0.6%) to 172.7 thousand. It also includes agency workers; this group responds the most substantially to economic fluctuations and therefore it is a suitable barometer of changes. Previous decreases were deeper there and thus it seems that the situation has stabilised.

Other increments or decrements were marginal. A small exception from the long-term trend are values in the section of 'mining and quarrying,' in which there was a 1% increase (by 0.2 thousand); this economic activity, however, remains to be the least important with its total number of jobs of mere 18.2 thousand.

Average gross monthly wages

The average wage (CZK 43 412) increased nominally by CZK 3 188 in the Q4 2022, compared to the corresponding period of 2021, i.e. by 7.9%. It is an average of a very diverse development on the level of individual branches (fields of activity), enterprises, or organisations. Quarter-on-quarter growth rate (after seasonal adjustment) was increasing during the year 2022. The year-on-year nominal increase in the Q4 2022 was the highest since the Q2 2021.

Expressed in real terms, however, we still have to speak about a decrease of wages. It is because the average wage, after having been adjusted by the influence of inflation, decreased by 6.7%, which was already the fifth successive decrease. The real wage growth depends on the growth of consumer prices, which reached 15.7%, year-on-year, in the Q4 2022. For the sake of completeness, let's mention that in the Q1 2022, the average wage decreased in real terms by 3.5%, in the Q2 by 9.8%, and in the Q3 by 9.7%. The year-on-year price increase was the highest namely in the Q3 2022 (17.6%).

The wage development was also extraordinarily differentiated by CZ-NACE section, even when compared to the previous quarter. In one CZ-NACE section, there was even a nominal decrease – it was in 'education' in which wages decreased by 0.3% or CZK 147 to CZK 49 021. In other CZ-NACE sections, there was an increase ranging from 4.5% up to 14.6%.

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The weakest nominal growth (following the 'education') can be found in 'human health and social work activities', in which the average wage increased by 4.5% to CZK 48 074. Without those two economic activities, in which the state is highly dominating, that together employ 16.5% of all employees and that acted as a break, wages would increase with about nine percent growth rate, year-on-year. 'Water supply; sewerage, waste management and remediation activities' had less than eight percent increase (7.4%); in all the remaining ones there was a higher increase.

Conversely, the wage increase was driven up the most by 'electricity, gas, steam and air conditioning supply' (14.6%, i.e. by CZK 8 282), in which the average wage got to the level of CZK 65 034. Thus it was the third highest among the CZ-NACE sections.

'Information and communication' remained the first; the average wage increased there by 9.1% to CZK 73 053. The second highest average wage can be found in 'financial and insurance activities', in which the average wage increased by 10.3% to CZK 66 400.

Dismissals of workers with low wages is probably the reason why the average increased by 11.6% in 'other service activities'. In 'mining and quarrying', the average wage increased by 10.1% to CZK 48 822. In 'administrative and support service activities,' wages increased with a ten percent growth rate; the wage level thus reached CZK 29 779 and thus it was the second lowest. The absolutely lowest average wage continued to be among employees in 'accommodation and food service activities' (CZK 24 686), while it increased by 8.8%, year-on-year.

In the remaining sections, the nominal growth of wages ranged from 8.1% in 'public administration and defence; compulsory social security' to 9.8% in 'agriculture, forestry and fishing'.

In 'manufacturing', which is the largest section of the CZ-NACE, wages increased by 9.3% to CZK 41 549. A slightly weaker growth (9.0%) can be found in 'construction', in which wages increased to CZK 37 223. In 'transportation and storage', the wage increase was by 9.7% to CZK 38 706. In 'wholesale and retail trade; repair of motor vehicles and motorcycles', as the second most important section as for the number of employees, wages increased by 8.5% to CZK 39 574.

As for statistics of working hours (hours worked), there was a lower number of non-worked hours in the Q4 2022 compared to the corresponding period of the previous year. In the Q4 2022, bonuses usually make a significant part of earnings.

In terms of real wages, all the mentioned increases were lower than the inflation and therefore they were decreases. It can thus be assumed that, except for smaller exceptions, the purchase power of earnings of all Czech employees decreased, year-on-year.

Development in Regions

Regional results do not depict such considerable differences that we can see as for economic activities (industries). Nevertheless, in terms of the number of employees, there were small year-on-year decreases in five Regions in the Q4 2022 as follows: by 0.7% in the Ústecký Region, by

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0.4% in the *Olomoucký* Region and in the *Zlínský* Region, by 0.2% in the *Moravskoslezský* Region, and by 0.1% in the *Vysočina* Region. On the other hand, a considerable increase in the number of employees was again in Prague (by 3.3%), which also follows the trend that was obvious in the pre-covid period. A higher increase was also in the *Plzeňský* Region (1.7%) and in the *Středočeský* Region (0.8%). In the *Jihomoravský* Region, the number of employees increased by 0.5% and in other Regions it was less.

As for the development of average wages, it is difficult to find some unifying rule there. The lowest nominal growth (6.5%) was in the *Karlovarský* Region; it was weak in the *Plzeňský* Region and in the *Pardubický* Region as well (both the same, 6.7%). Conversely, the highest wage increases were in the *Středočeský* Region (8.5%) followed by the *Jihočeský* Region (8.3%), the *Ústecký* Region (8.2%), and the *Jihomoravský* Region (8.1%).

According to the absolute level of earnings, the Capital City of Prague still remains to be the richest among the Regions of the Czech Republic. The average wage in Prague was CZK 52 213. The *Středočeský* Region maintained its second position with CZK 43 730. On the other hand, the *Karlovarský* Region remained to be the Region with the lowest wage level (CZK 38 019). It is followed with a margin by the *Pardubický* Region, in which the average wage got to CZK 39 345.

Cumulative results for the whole year 2022 and comparison with the year 2018

In the year 2022, the registered number of employees increased by 0.9%. The average wage (CZK 40 353) increased nominally by 6.5%; however, in real terms it decreased by 7.5%, because the inflation reached 15.1%.

Year-on-year indices for annual data thus show a picture, which does not differ much from the quarterly ones. What can be more interesting is a comparison of development in economic activities over a longer time period, e.g. for a four-year period since 2018. In this respect, cumulative data are more stable and therefore more comparable than quarterly data.

In total, the average wage for the 4-year period nominally increased by 25.9%. In real terms, however, it even does not reach the level of the year 2018, it is by 0.5% lower due to the high inflation, because the consumer price index was higher than the nominal wage increase in the mentioned period.

Chart 1 Development of average wages in selected industries (economic activities), years 2018–2022

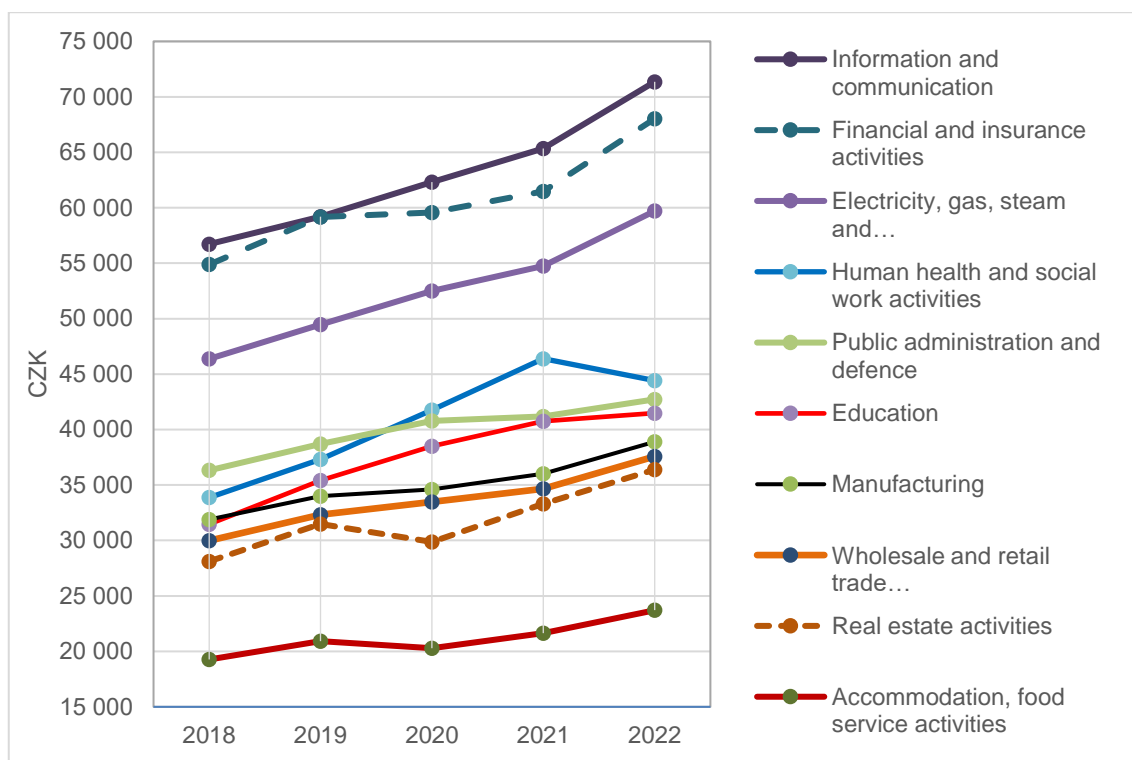
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In 'administrative and support service activities', wages increased relatively the most, from CZK 20 955 to CZK 28 795; for the mentioned four years they thus increased by 37.4%, which was largely sufficient to compensate the price increase. On the other end, we can find 'public administration and defence; compulsory social security,' in which the average wage got only from CZK 36 323 to CZK 42 725, i.e. it only increased by 17.6%.

The second lowest increase was in 'mining and quarrying', from CZK 36 028 to CZK 43 149, i.e. by 19.8%. 'Manufacturing' with a nominal increase by 22.0% ranks third; the average wage increased there from CZK 31 893 to CZK 38 899.

Nevertheless, in some economic activities, the wage development was anything but smooth. Slumps in the year 2020 related to anti-infectious measures were reflected in 'real estate activities', in which, however, wages considerably increased in total by 29.4% and also in 'accommodation and food service activities,' in which, on the other hand, wages increased for the whole period only by 23.0% from CZK 19 272 to CZK 23 708. An unbalanced development is also clear from the annexed chart as for 'financial and insurance activities', in which wages increased in total by 24.0% from CZK 54 882 to CZK 68 030.

The diversity of development is also reflected in some changes in the order of industries (economic activities) from the best to the worst paid. The economic activities of 'education' and 'human health and social work activities' are special in this regard, remuneration depends there to a large extent on government decisions on salary scale adjustments. In 'education' in 2018–

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2020, the average wage was considerably increasing, however, afterwards it started to slow down; in total, it thus increased by 31.8% from CZK 31 464 to CZK 41 485. While in 2018 it was still below the level of an average wage in manufacturing (by CZK 429), in 2022 it was already considerably exceeding it (by CZK 2 586). In 'human health and social work activities,' the growth was even sharper – up to 2021, when high covid bonuses were paid; however, afterwards wages slumped. In total, wages increased there by 31.1% from CZK 33 871 to CZK 44 417, by which this economic activity exceeded the wage level in 'public administration and defence; compulsory social security'.

A rather smooth development can be found in 'information and communication' and 'electricity, gas, steam and air conditioning supply', which are industries with the highest and the third highest, respectively, absolute level of the average wage (see Chart 1 above).

Economic activities (industries) underwent a remarkable development also as for the registered number of employees. It increased the most in 'information and communication,' in which it increased by 12.4% for the four-year period. A considerable increase by 11.8% was in 'education' and by 9.0% in 'real estate activities'. On the other hand, the biggest slump in the number of employees can be found in 'mining and quarrying,' in which almost a quarter of jobs (23.1%) disappeared. Other strong decreases were in 'administrative and support service activities' (17.6%) and in 'accommodation and food service activities' (12.1%). In 'public administration and defence; compulsory social security,' which is often discussed in the media, there was a drop by 0.1%.

Median wages and decile intervals of wages, breakdown by sex

The News Release of the CZSO on wages also contains a piece of data on the median wage, which is calculated from a mathematical model of the distribution of earnings and shows the wage of a middle employee, i.e. a common wage level. Extreme deciles were calculated concurrently, too. In the Q4 2022, the median wage got to CZK 37 463, which is by CZK 3 084 (by 9.0%) more than in the corresponding period of the previous year.

The wage interval has slightly narrowed in the Q4 2022, year-on-year. Ten percent of employees with the lowest wages were receiving a gross wage below CZK 18 666 (the bottom decile increased by 8.0%, y-o-y), whereas the opposite tenth having highest wages earned over CZK 70 514 (the top decile increased by 7.2%). The decile ratio decreased by 0.03 point, year-on-year. Females played an exclusive role in this development; conversely, among males, the distribution (wage interval) widened.

Male median wages were still considerably higher than female ones; in the Q4 2022, the female median wage was CZK 34 554, whereas the male median wage was CZK 40 232. The gap between median earnings thus was 14.1%.

Concurrently, wages of males were distributed over a substantially wider interval, especially the area of high earnings is considerably higher for males than for females, which was even supported by the latest development. As for the top decile for females, their earnings currently increased by 4.4%, whereas for males they increased by 9.6%. The top decile for females thus was

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CZK 62 986 and for males it was CZK 78 190, by which the gap at high earnings was 19.4%. As for low earnings, the difference is lower as usually: the bottom decile for females currently increased by 8.5% to CZK 17 817 and for males it was by 6.5% to CZK 19 463, which results in a gap of 8.5%.

* * *

Preliminary results from the **Information System on Average Earnings (ISAE) for the whole year 2022** bring a more detailed view of wage structures, distributions, and socio-economic breakdowns. However, the ISAE applies a different methodology for the calculation of personal earnings of an employee (first of all, it excludes all absences at work) and therefore these data are not comparable either to the aforementioned amounts of the average wages or to figures given in tables annexed to the News Release of the CZSO.

The ISAE also measures employees by **state citizenship**, which was especially important for the last year. The average number of employees with Ukrainian citizenship in this sample survey increased after grossing-ups by 44.4%, y-o-y, from 68.4 thousand to 98.7 thousand, by which this group significantly exceeded Slovaks (73.1 thousand). Median wages of Ukrainians were always very low, the lowest from among big groups of foreigners in the Czech Republic. In 2022, it only reached CZK 28 415, three quarters of the level of wages of Czech citizens; they were also only by 3.3% higher, y-o-y, whereas the median wage of Czech citizens (CZK 37 690) increased by 6.6%.

As usually, Slovaks received very high median wages in Czechia (CZK 41 599); they were by 7.9% higher, year-on-year. Substantially lower than the Czech ones were also wage levels of other three smaller groups of foreigners, i.e. of Bulgarians (CZK 31 575), Romanians (CZK 31 629), and Poles (CZK 34 791). While the number of records of Romanians and Bulgarians in the ISAE database considerably decreased, year-on-year (by 9.7% and 6.3%, respectively), the number of Poles increased by 2.7%. The number of citizens from Slovakia increased only insignificantly (by 0.5%); numbers were increasing much more as for other state citizenships.

According to the valid Classification of **Occupations** (CZ-ISCO) managers were the group with highest earnings having the median wage of CZK 74 151; it increased by 7.3%, year-on-year. Their wages are the most differentiated ones; a tenth of the best-paid earned over CZK 170 073, while the opposite tenth received less than CZK 38 102. The second highest wage level can be found in professionals with the median wage of CZK 52 455 (an increase only by 4.1%). The third major group includes technicians and associate professionals with the median wage of CZK 42 769 and the fourth major group of clerical support workers had the median wage of CZK 32 460. Service and sales workers often belong to low-income employees¹ – they had the decile ranging from CZK 19 193 to CZK 45 261 and their median wage was CZK 28 573. The

¹ In general, such an employee is considered to be a low-income (low-wage) employee who earns less than 2/3 of the total median wage; according to preliminary results of the ISAE for the year 2022, the threshold was CZK 24 941.

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median wage of craft and related trades workers increased the most, y-o-y (by 8.4%); thus it got to the level of CZK 35 197; concurrently, the number of records decreased there, y-o-y. Plant and machine operators and assemblers had CZK 33 494 (an increase by 6.9%). At elementary occupations, there is always the lowest wage level; currently, the median increased by 5.4% to CZK 23 308; therefore, they have over a half share of low-income employees, their decile range was from CZK 16 848 to CZK 36 103. Concurrently, among them, the number of records increased the most, year-on-year (by 4.4%). As for small major group of employees in armed forces occupations, their median wage only increased insignificantly by 1.8% to CZK 42 793.

By **age group**, employees up to 20 years of age earned the lowest wages (the median wage CZK 27 143), only every tenth of them exceeded the threshold of CZK 37 140. Concurrently, their number increased the most, y-o-y, in the sample (almost by 15%). In the age group of 20–29 years, the median wage was already much higher (CZK 34 335) and in the age group of 30–39 years, the median was the highest (CZK 39 387). In the other age groups, wages are decreasing, to CZK 38 489 for the most numerous category of those aged 40-49 years, and to CZK 36 879 for both categories of those aged 50-59 years as well as for those aged 60+ years. Year-on-year increments of median wages did not differ much.

Wages are also highly structured by the level of **educational attainment** of an employee. Employees with higher education have the highest earnings, their median wage was CZK 52 865. Conversely, wages of employees with primary education or with incomplete primary education remained the lowest (CZK 28 774). Graduates of secondary schools with an A-level examination earned much more (CZK 38 204) than those without the A-level examination (CZK 31 646), but less than employees with short-cycle tertiary education or graduates from bachelor study programmes (CZK 43 566). Wages were growing the fastest among less educated employees, the highest increase (by 8.7%) was in the ninth decile at secondary education without the A-level examination. On the other hand, the lowest increase was in wages of employees with short-cycle tertiary education and bachelor study programmes in the medium and higher area (the median by 4.4%, the ninth decile by 3.3%), it was also weaker among those with higher education.

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