

DISCUSSION PAPER SERIES

IZA DP No. 15600

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in 2021, the Second COVID-19 Year**

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## ABSTRACT

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# COVID-19 and the Swedish Labor Market in 2021, the Second COVID-19 Year

The pandemic has mainly affected the state of health and mortality, but has also had effects on the economy and the labor market. This article reports the development of the total number of employees, their distribution by sectors and regions and the changes in the number of employees for different groups in 2021 compared with 2019 in Sweden. We do not deal with the development of the number and composition of the self-employed. We also do not go into the development of employees' conditions in terms of wages, working hours and working environment. However, we study something that is in focus for the general debate: How was the development of the number of employees and their composition in 2021, "the second year of the pandemic"? The main result is that we find large differences in the development for different groups. The most surprising is the positive development of the number of foreign-born employees.

**JEL Classification:** I15, J15, J21, J23, J61

**Keywords:** Swedish labor market, COVID-19, employment, migrants

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# **Covid-19 and the Swedish labor market in 2021; the second Covid-19 year**

Fredrik W. Andersson and Eskil Wadensjö

In a previous IZA DP (No. 15167), we reported the development of the number of employees and their composition during 2020 in Sweden, the first year with Covid-19 (Andersson and Wadensjö 2022). We can now report how labor market evolved in 2021, the second year with Covid-19. We will first briefly report the main results for 2020, and then report the results for 2021.

The number of employees decreased in Sweden during the spring and summer of 2020, but recovered almost completely at the end of the year. The number of employees was only one percent lower in December 2020 than in December 2019. At the end of the year, only the private sector showed a decrease in the number of employees, while the various parts of the public sector showed an increase – not least the regions, which are mainly responsible for healthcare. A breakdown of industries within the private sector shows that the decline was concentrated to only a few. The differences in development are relatively small between different parts of Sweden and between different types of municipalities. Percentage-wise, the decline was greatest in municipalities that bordered Norway.

## 1. The development of the number and the composition of employees in 2020

For large parts of the year, women were more affected by the pandemic. The decline in the number of employees was greater among women than among men. But in the autumn the trend reversed and the labor market recovered better for women and in December the picture was the opposite, although the difference in the development of the number of employees between women and men was only marginal. A breakdown by age shows that it was among the young (16–19 years) and the elderly (70 years and older) that there was a decline, while in other age groups there was no or very little decline. Looking at the development by education, we found that the development of the number of employees was more positive for those with higher education. For many, perhaps the most surprising result was that the development of the number of employees was significantly better for the foreign-born than

for the domestic-born. It was best for those born in Africa and Asia, and among them best for those from Afghanistan (an increase of 12.4 percent over the year). Not everyone who works in Sweden is registered here – some work part-year (such as berry pickers) while others commute to Sweden to work. The number of jobs performed by non-registered employees fell very sharply in the spring of 2020 and did not recover during the year. These were the main features of the development in 2020. We will now move on to look at the development in 2021.

## 2. The development of the number and composition of employees in 2021

Our study is based on the new administrative data source AGI, which has created new opportunities to study labor market developments monthly on a granular level. Previously, there were only data on an annual basis. With the new data, we can study at a detailed level which jobs are added or terminated each month, for example with regard to gender, age, level of education, country of birth and industry. Differences between people who are and are not registered as living in Sweden among those who work in Sweden can also be investigated.

Figure 1 shows the number of employees according to sector in 2021 compared to the number in 2019. The overall labor market development largely depends on the development in the private sector. Just over two-thirds of all employees can be found in the private sector. The figure shows that the private sector recovered in terms of numbers during the first part of 2021 to be higher than comparable months in 2019 as of August. At the end of the year, December, the private sector had had a positive development in the number of employees of just over 2 percent. In connection with the pandemic, the state strengthened the financial position of both the regions and the municipalities so that they could cope with a situation of possible economic crisis. According to SKR's Economic Report (2022), the two sectors reported a total result of SEK 69 billion in 2021. The number of employees within the regions was constantly 2–4 percent more during all months of the year than in 2019. This can be contrasted with the fact that the municipalities instead reduced the number of employees at the beginning of the year, but like the private sector, the trend changed during August. At the end of the year, the municipalities had almost 1 percent fewer employees than at the end of 2019, while the corresponding figure for the regions was an increase of 2 percent.

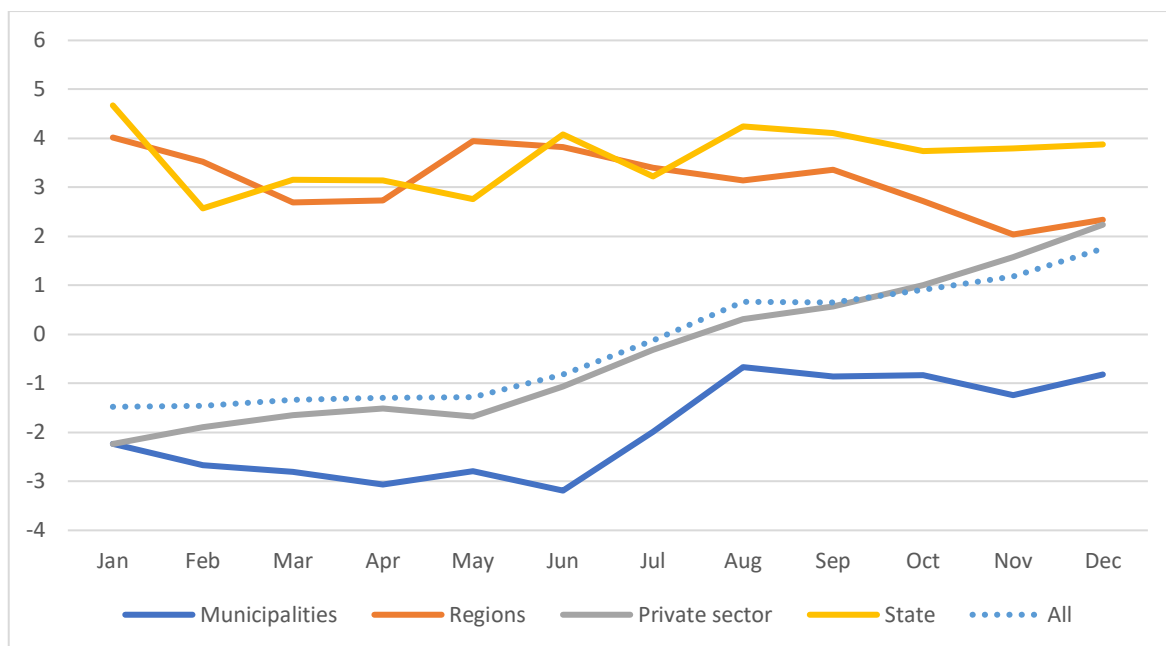


Figure 1. Percentage change in Sweden of the number of employees according to sectors and in total between 2019 and 2021.

Source: Statistics Sweden, own calculations.

An important part of the development is that the industries that were most negatively affected during the first months of the pandemic have now recovered. The industries that had the biggest decline between December 2019 and December 2020 in the number of employees were Hotels and restaurants with minus 22.3 percent, Culture, entertainment and leisure with minus 9.3 percent and Transport and warehousing with minus 3.5 percent. The social distancing that the Public Health Agency recommended early during the pandemic remained for a long time as a new natural behavior. In an attempt to reduce the spread of infection, industries were given various restrictions. For example, restaurants were restricted on the number of seats in the premises, size of parties and opening hours. As a result of the restrictions and effects of the pandemic, reduced travel, both within the service (SCB, 2022) and privately. However, the transport sector did not experience the same restrictions as the restaurant industry and this may have partially contributed to the fact that the transport sector already recovered at the end of 2020, while hotels and restaurants as well as culture, entertainment and leisure only recovered in the second half of 2021. See Figure 2 for the development in these three crisis industries in 2021 when the restrictions were lifted and people began to socialize again in restaurants. At the end of the year, Arts, entertainment and

recreation reported an almost 2 percent increase in the number of employees, while employees in Accommodation and food service activities were more or less unchanged compared to 2019.

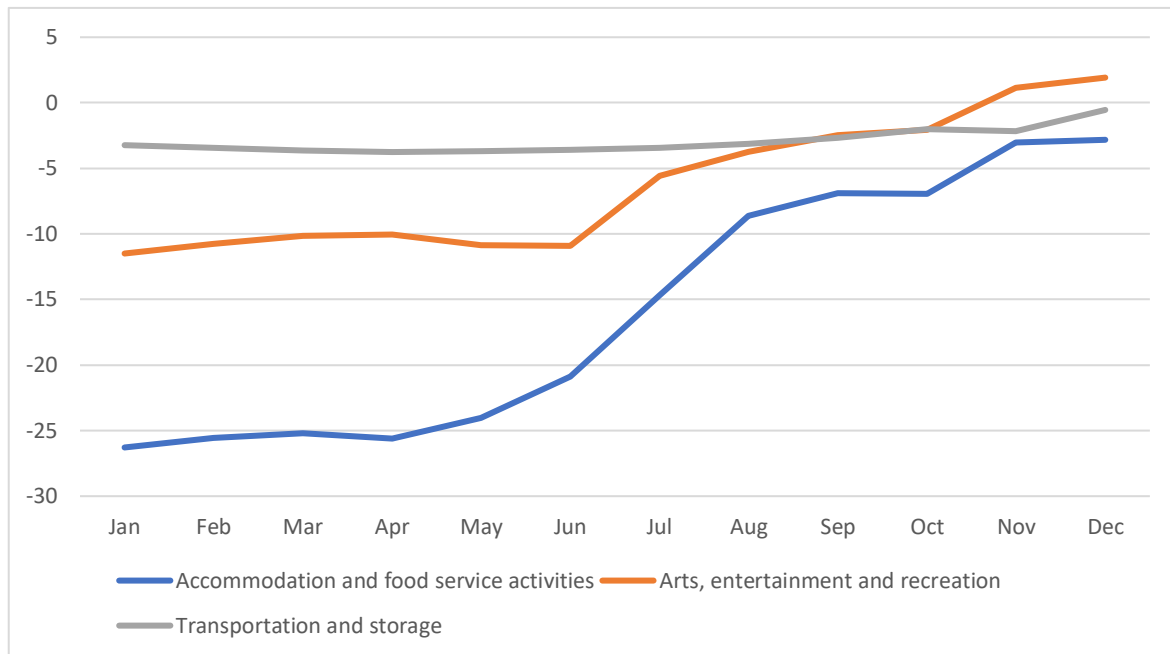


Figure 2. Percentage change of the number of employed in 2021 compared to 2019 in industries that had large reductions in the number of employed in 2020.

Source: Statistics Sweden, own calculations.

Municipalities have different geographical and demographic conditions for employment and housing. Sweden's municipalities and regions (SKR) has divided Sweden's 290 municipalities according to various criteria, e.g. countryside/big city, tourist attractions, commuting opportunities, etc. Strömstad is the municipality that was hardest hit by the effects of the pandemic. Strömstad is a border town to Norway and is classified by SKR as a rural municipality with a tourism industry and can partly be categorized as a seasonal labor market. During the summer of 2020, the number of jobs decreased by just over 10 percent and by the end of the year by 7.5 percent. In 2021, the decline in the early summer months was even greater but begun to recover from July. At the end of 2021, the number of employees was 3 percent lower than at the end of 2019. In table 1, we report the development in the number of employees depending on the type of municipality according to residence. Of greatest interest is the labor market situation in the last quarter of 2021. Nationwide, the employment increased in the last quarter by 1.3 percent. Employment in the cities grew in parity with the

total. However, the largest percentage increase in the number of employees can be found in commuting municipalities near the cities, just over 2 percent. It is also these types of municipalities that fared best throughout the year. The increases in these municipal types may reflect increased commuting, among other things, by moving to suburban municipalities when the possibility of working from home was made possible. The result in Table 1 shows that the rural municipalities lose relatively most employment. This development in turn gives rise to an interesting question: are those who have lost their employment individuals who worked within the municipality or individuals who commute? When the register is supplemented with daytime population, we will be able to study that. Another question is: to what labor market status do those who lose their employment go? We can answer this question with the help of Statistics Sweden's new register Population labor market status (BAS), which categorizes the population between the ages of 15 and 74 on a monthly basis as: employed, unemployed, student, pensioner, sick or other. Currently, there are very few analyzes of this material. One example is Andersson (2022), who studies the group of individuals who neither work nor study in more detail.

Table 1. Percentage change of the number of employees according to residence in different groups of municipalities between 2019 and 2021.

<b>Municipality groups</b>	<b>Quarter 1</b>	<b>Quarter 2</b>	<b>Quarter 3</b>	<b>Quarter 4</b>	<b>2021</b>
Rural municipalities	-4.2	-3.5	-2.1	-0.8	-2.6
Rural municipalities with visitor industry	-3.2	-2.7	-0.3	0.9	-1.3
Commuting municipalities near medium-sized towns with a low commuting rate	-2.4	-2.0	-0.5	0.5	-1.1
Small towns	-1.7	-1.4	0.1	1.1	-0.5
Commuting municipalities near a small town	-3.0	-2.6	-1.0	0.1	-1.6
Commuting municipalities near a big city	-0.3	0.0	1.4	2.1	0.8
Commuting municipalities near a medium-sized city	-1.0	-0.6	0.9	2.0	0.3
Big cities	-1.5	-1.4	0.3	1.3	-0.3
Medium-sized cities	-1.2	-0.8	0.7	1.3	0.0
<b>Total economy</b>	<b>-1.4</b>	<b>-1.1</b>	<b>0.4</b>	<b>1.3</b>	<b>-0.2</b>

Source: Statistics Sweden, own calculations.

### 3. The development of the number of employees in different groups



We will now examine in more detail the development of different groups, starting with how it has been for women and men. For almost all of 2020, the development of the number of employed was worse for women than for men, but the difference evened out and the recovery was later greater for women than for men. At the end of the year, the situation was thus reversed, although the difference was small. In the first half of 2021, the development of employees was again less among women than among men compared to 2019, see figure 3. After August, when the labor market in the private sector started to grow again, the sector employed relatively more women. An interesting result is that throughout 2021, the women's labor market developed worse than the men's labor market within both regions and municipalities, either through a larger decrease or a smaller increase. The central government is the sector in which the number of employed among women increased the most during the year. In December, the increase was 5.2 percent, which can be contrasted with a decrease in the municipal sector of 1.7 percent.

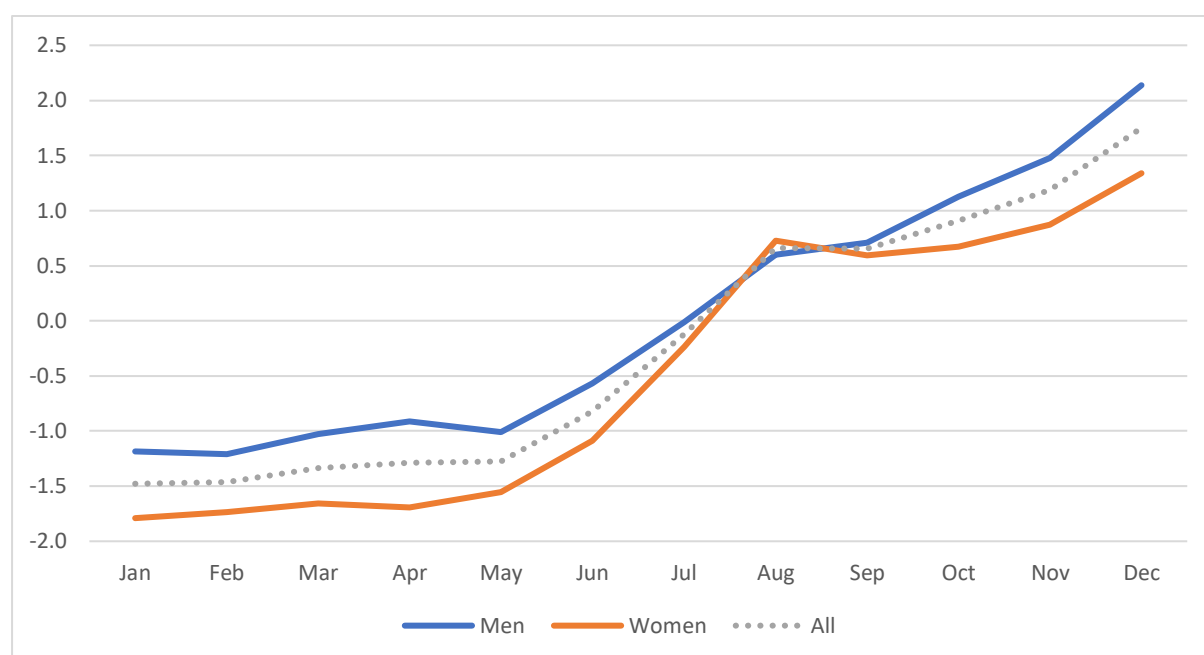


Figure 3. Percentage change of the number of male and female employees in Sweden between 2019 and 2021.

Source: Statistics Sweden, own calculations.

In 2020, employment decreased significantly for two age groups – those aged between 16 and 19 and those aged between 70 and 74. Both groups recovered somewhat from the large

decline at the end of the first year of the pandemic. But the young had lost 17 percent in employment in December 2020, while the corresponding decline for the older age group was 20 percent. For the young, the explanation can be sought in the fact that the employers made few new hires, especially in the industries in which many young people get their first job. For the elderly, the explanation can be sought in the fact that the restrictions that were introduced hit the elderly the hardest, either because they did not want to work due to the risk of infection or because employers prioritized other age groups when downsizing. In 2021, the trend reversed. We see a marked increase in the number of employees among young people. For those aged 70–74, we still see a decline compared to before the pandemic. However, the decline was significantly smaller in 2021 than in 2020, see Figure 4. Notably, all sectors except the regions experienced a decrease in the number of employees in this age group.

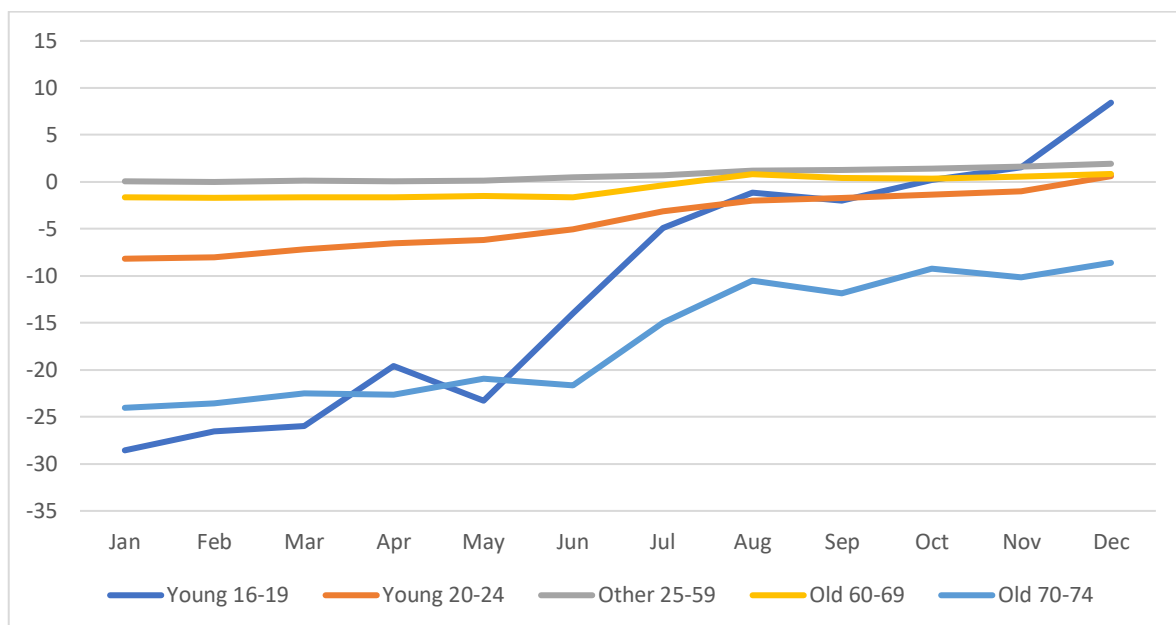


Figure 4. Percentage change of the number of employees in different age groups in Sweden between 2019 and 2021.

Source: Statistics Sweden, own calculations.

The development has been different for groups with different education. A weakness with administrative data is that reports of the level of education have a lag. It affects people who are trying to raise their level of education. It can lead to them being incorrectly reported in a group with a shorter level of education than the correct one. In 2020, the decline in the number of employees was greater in the group with shorter education. Initially in 2021, the

tendency was the same. But when the labor market began to improve, it is now possible to see an increase in the number of employees with pre-secondary education as well as individuals with no information on educational level (unknown). Administrative information on education level is mainly missing for those born abroad. By the end of the year, the number of employees without a known educational level had increased by 71 percent, an increase of 44,500 individuals. As the crisis industries began to re-employ and the labor market recovered, the number of employed also increased for people with a shorter education. However, by the end of 2021, the labor market had not recovered for all educational groups compared to 2019, see Figure 5.

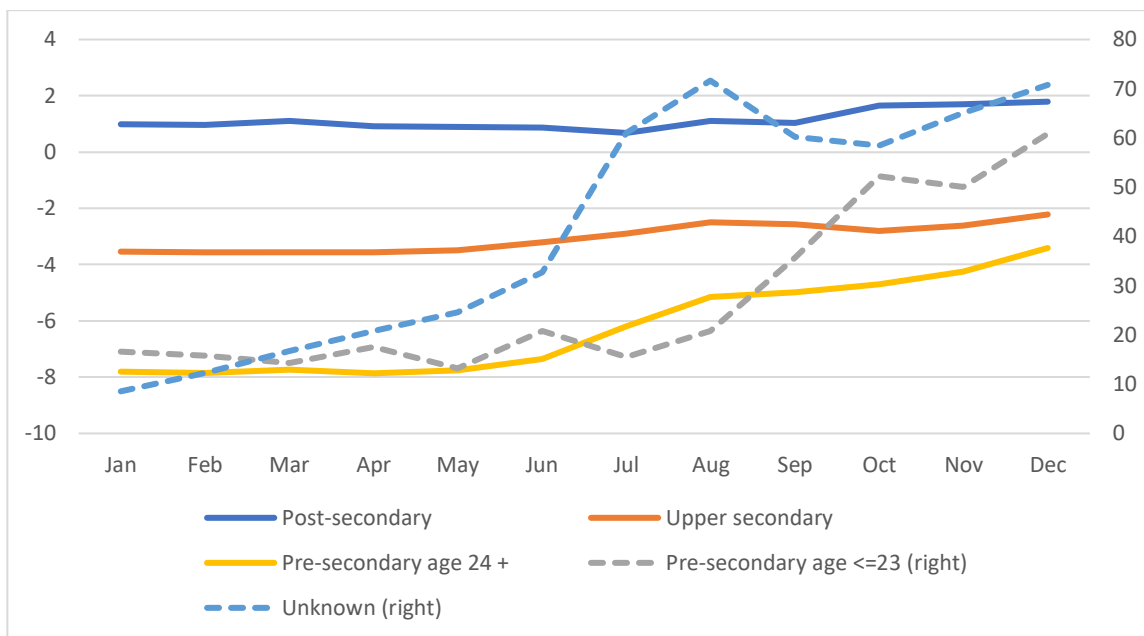


Figure 5. Percentage change of the number of employees according to education in Sweden between 2019 and 2021.

Note. Among those with less than secondary education those 24 years and older and those aged 23 years and younger are included separately.

Source: Statistics Sweden, own calculations.

The most surprising result in our previous survey regarding 2020 was a more positive development in the number of employees among foreign-born compared to the development in the number of employees among domestic-born. In December 2020, the number of foreign-born employees had increased by 1.1 percent, while the corresponding figure for those born in Sweden was minus 1.5 percent. Although the labor market in 2021 overall grew

in relation to 2019, the difference in development between foreign born and those born in Sweden is even greater in 2021, see Figure 6.

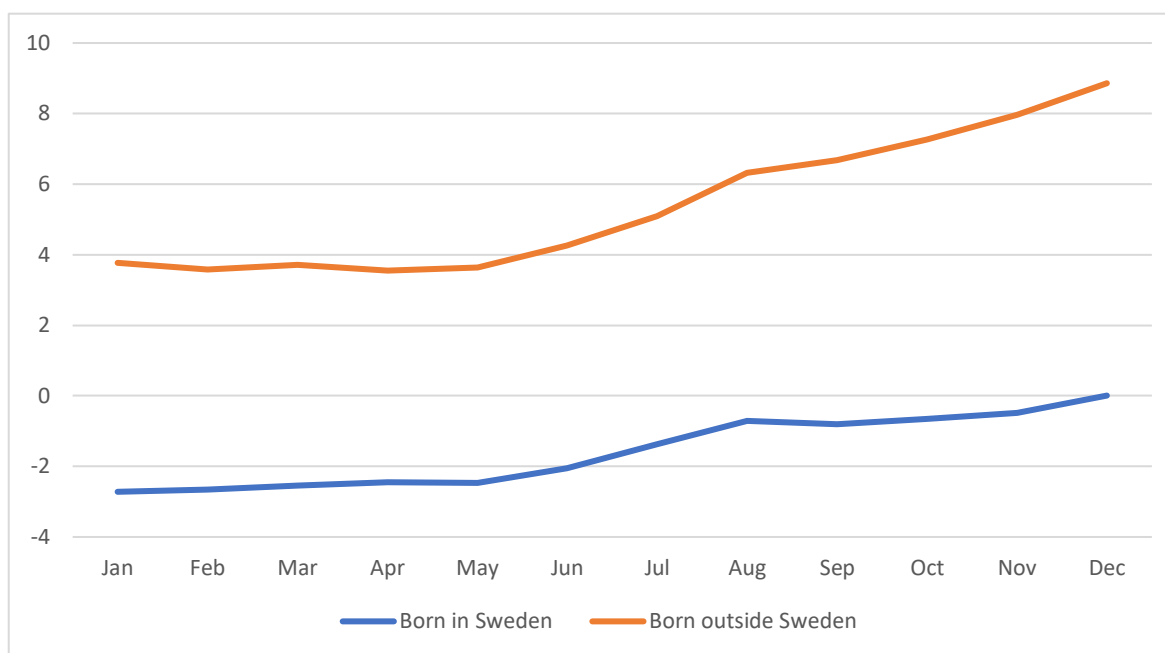


Figure 6. Percentage change of the number of employees according to country of birth between 2019 and 2021.

Source: Statistics Sweden, own calculations.

The development of the number of employees by country of birth in 2021 compared to 2019 divided into different groups of countries of birth is shown in Table 2. Only a few groups show a decrease in the number of employees. Perhaps a little surprisingly, the Nordic countries, except Sweden, showed the most negative development. This group includes many who came from Finland to Sweden in the 1960s and the early 1970s as labor migrants. The number of employees from Finland decreased by 12 percent at the end of the year, which is significantly more than the decrease in the number of employees from Denmark and Norway, which decreased by 3.3 and 2.7 percent respectively. The large decline for people from Finland may be partly due to retirements. However, we see a very strong and surprising rise for those born in Africa, 13.5 percent in quarter four, and Asia, 14.1 percent. Changes cannot only be attributed to demographic changes such as more of these groups being of working age. If we look at different countries, we find that the rise is greatest for those born in Afghanistan, 41.9 percent at the end of the year. Afghanistan is a country from which most came as refugees, and the result is therefore of special interest, not least for studies of

integration.<sup>1</sup> But the rise is also very large for those born in other countries from which many refugees came, such as Syria (26.3 percent), Eritrea (23.2 percent) and Somalia (15.0 percent).

Table 2. Percentage change of the number of employees in Sweden between 2019 and 2021 among those born in Sweden and groups of other countries.

Group of countries	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Africa	6.3	6.6	10.1	13.5	9.2
Asia	8.6	8.5	11.0	14.1	10.6
EU27 excluding the Nordic countries and UK	1.7	2.1	3.7	4.9	3.1
Europe except EU27, UK and the Nordic countries	2.5	2.5	2.6	3.2	2.7
North America	3.2	3.1	5.6	7.4	4.9
Nordic countries except Sweden	-9.5	-9.4	-7.9	-7.4	-8.6
Oceania	3.4	3.4	2.9	3.4	3.3
Former Soviet Union	-7.2	-5.8	-4.2	-4.4	-5.4
South America	-0.1	-0.3	1.7	3.0	1.1
Sweden	-2.6	-2.3	-1.0	-0.4	-1.6
Total	-1.4	-1.1	0.4	1.2	-0.2

Note: The Soviet Union consisted of countries that now are classified as European or Asian countries.

Source: Statistics Sweden, own calculations.

#### 4. The development of the number not registered in the population register

Not everyone who is employed in Sweden is registered as living in Sweden. Some work part of the year as seasonal employees and others commute from mainly our neighboring countries in the Nordics, but also from, for example, Poland. Due to the lack of quality in the completed social security numbers of the staff who are not registered in the national register, we cannot analyze the number of employees, but must instead analyze the number of jobs. During 2020, the number of jobs decreased to a very large extent for people who were not registered in Sweden. The development in 2021 is different. During the year, there is a

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<sup>1</sup> Studies of those who arrived as unaccompanied children show that those of them who have arrived from Afghanistan are established on the labour market to a higher extent than unaccompanied minors who have arrived from other countries. See Celikaksoy and Wadensjö (2017).

gradually growing labor market for those not registered in the population compared to 2019 and at the end of the year there are 5 percent more jobs, see Figure 7.

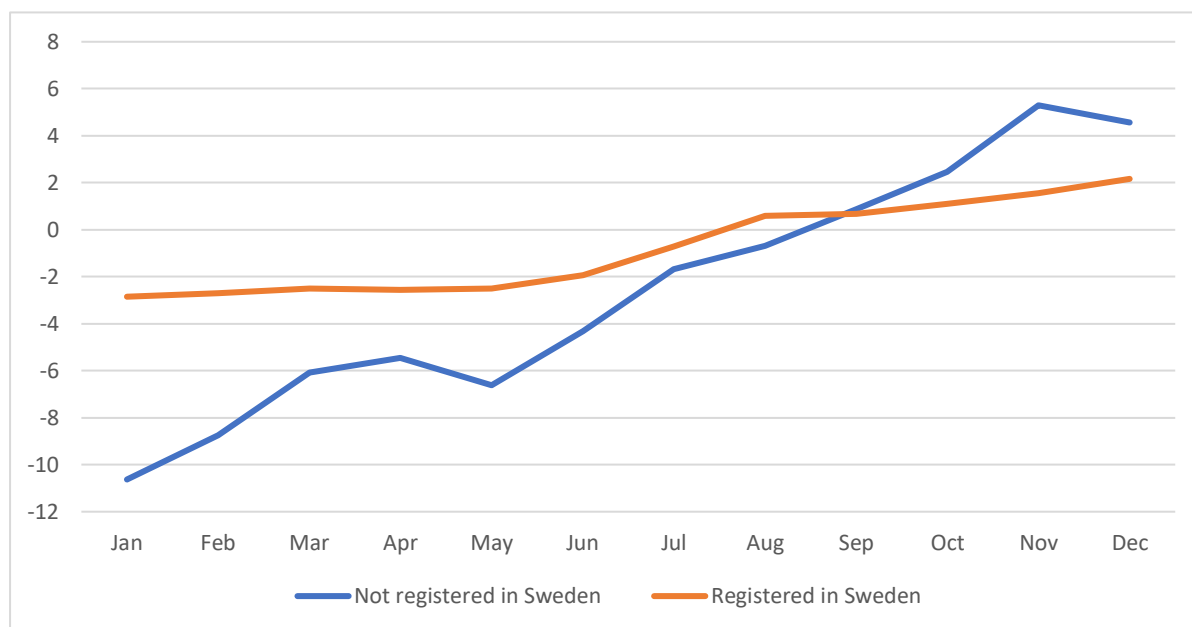


Figure 7. Percentage change of the number of jobs according to if they are registered as living in Sweden or not in Sweden between 2019 and 2020.

Note: Only those with an income higher than SEK 99 are included

Source: Statistics Sweden, own calculations.

## 5. Conclusions

After the shock caused by the pandemic to the labor market in 2020, the main conclusion of this study is that the number of employees continued to recover in early 2021, and the year even ended with the labor market showing an increase in the number of employees compared to 2019. In terms of the number of employees in the private sector, also the industries that were most affected in 2020 have recovered. However, the composition of the employees has changed slightly when comparing the situation at the end of 2021 with the situation in the same month in 2019. The decline for those aged 70–74 remains partly present and the difference in the development for different education groups remains – the amount of employment in the group with higher education has developed strongest. There is a very surprising result that was already present in 2020 but is even stronger in 2021. It is that the

development of the number of employees among those born abroad is very strongly positive. This mainly applies to those from Africa and Asia, who fared better than other groups in terms of the development of employment during the pandemic. Most of all, the number of jobs has increased among those born in Afghanistan and then among other countries from which many refugees have come in the last decade. There is reason to study this development more closely; that groups deemed to have a particularly difficult labor market situation during the pandemic crisis fared better than other groups.

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