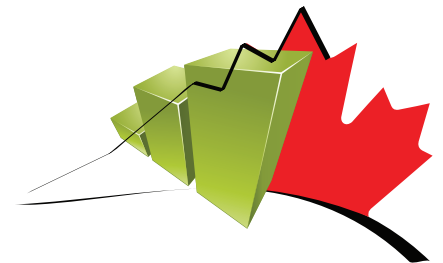


# Use of the Canada Emergency Wage Subsidy program by employer businesses in 2020



by Huju Liu, Yuqian Lu and Michael Willox

Release date: June 23, 2021



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# ***Use of the Canada Emergency Wage Subsidy program by employer businesses in 2020***

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DOI: <https://doi.org/10.25318/36280001202100600006-eng>

## **Abstract**

This Insights article presents information on how employer businesses used the Canada Emergency Wage Subsidy (CEWS) from April to October 2020. The analysis shows that employers' use of the program varied by industry and business employment size. Businesses' CEWS uptake rate was highest in the industries that experienced the largest declines in employment, such as the arts, entertainment and recreation industry, and the accommodation and food services industry. The uptake rate was highest among businesses with 10 to 49 employees, which recorded the sharpest employment losses. It was lowest among businesses with 1 to 9 employees, which experienced the smallest employment loss. CEWS recipients (businesses that received support from CEWS) were larger on average before the COVID-19 pandemic and experienced a greater employment decline than active non-recipients (businesses that did not apply for CEWS).

## **Authors**

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## Introduction

The purpose of this article is to provide information on how employer businesses<sup>1</sup> have used the Government of Canada's Canada Emergency Wage Subsidy (CEWS) program, how use differed by industry and business size, and the characteristics of businesses that have used CEWS. This information can help Canadians better understand the impact of the COVID-19 pandemic on Canadian businesses and how they used government financial support.

The CEWS program plays an important role in the federal government's COVID-19 Economic Response Plan, which was introduced in mid-March 2020 in response to the economic fallout from the COVID-19 pandemic. The CEWS program accounted for \$83.5 billion, or 37%, of the plan's estimated total spending for the 2020/2021 fiscal year (Department of Finance Canada 2020). Smaller programs such as the Canada Emergency Business Account and Canada Emergency Commercial Rent Assistance were also designed to support businesses. They represented 6% and 1%, respectively, of total spending in the plan for the same fiscal year. The objective of the CEWS program is to provide a wage subsidy to eligible employers so they can avoid layoffs and terminations by keeping employees on their payrolls and rehire employees who have already been laid off or furloughed.<sup>2</sup> The program initially supported employers with a subsidy covering 75% of eligible employees' wages for businesses that experienced a significant decline in gross monthly revenue.<sup>3</sup> As a result, employer businesses' use of CEWS is intrinsically related to the pandemic's economic impact.<sup>4</sup>

The analysis presented in this article uses recipient information collected from the CEWS program from April to October 2020. This was then linked with Statistics Canada's near-real-time monthly payroll administrative data, which cover all employers in Canada. Using this linkage, this article analyzes businesses' CEWS uptake by industry and business size (i.e., which industry or size category was more likely to receive support from CEWS), differentiates between businesses that received support from CEWS and those that did not, and tracks businesses over time to compare employment before and during the early stages of the pandemic. The analysis shows that businesses that used the CEWS program were typically in the industries and size categories that suffered the most significant job losses, and the businesses that used CEWS were larger on average before the pandemic and experienced a greater decline in employment than businesses that did not use CEWS.

The analysis herein can complement other published statistics that mainly focus on businesses that received support from CEWS—for example, detailed data on CEWS claims by province or territory, industry, and size (Canada Revenue Agency, n.d.), and the CEWS regional and community-level database (Statistics Canada 2021). It can also complement other published survey-based statistics such as those from the Canadian Survey on Business Conditions, in which businesses were asked whether they received financial support from CEWS, along with other government programs.

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1. The terms employer business, business and employer are used interchangeably in this article, all referring to a business with employees.
  2. Someone who has been laid off no longer works for their former employer, whereas someone who has been furloughed remains employed by their employer but is not working and collects no wage or salary.
  3. The minimum revenue drop was no longer required to qualify for CEWS as of period 5 (claims that cover July 5, 2020, and later).
  4. For more information on eligibility rules for employers and employees, see <https://www.canada.ca/en/revenue-agency/services/subsidy/emergency-wage-subsidy/cews-frequently-asked-questions.html>.

## The linked Canada Emergency Wage Subsidy and monthly payroll dataset

The data used for this analysis include information for almost 360,000 employer businesses that received financial support from CEWS from April to October 2020.<sup>5</sup> The CEWS program data contain the number of eligible employees, the total CEWS claim amount, and information on whether one or more employees were retroactively rehired during the application period, among others. However, the CEWS data do not include information about businesses prior to the pandemic. To be able to follow businesses over time before and during the pandemic and compare the characteristics of businesses that received support from CEWS with those of businesses that did not, the CEWS data were linked to Statistics Canada's monthly payroll data.<sup>6</sup> The payroll data used in this analysis include monthly information on the number of employees for every employer business in Canada from April 2019 to October 2020. The seven-month period during which the datasets overlap (April to October 2020) enables recipient businesses in the CEWS data to be identified in the payroll data going back to April 2019, 12 months before the onset of the pandemic in Canada. Linking these two datasets means recipient and non-recipient employer businesses can be compared for up to 12 months before and 7 months after the onset of the pandemic in Canada (the **pre-pandemic** and the **early pandemic** periods, respectively).

In addition to the business characteristics such as employment and industry that are available from the payroll data, the linked dataset enables three types of businesses to be identified based on their activity status during the early pandemic period: (1) **CEWS non-recipients**, which are active businesses that had employees on their payroll during the pre-pandemic and early pandemic periods but did not receive support from CEWS from April to October 2020;<sup>7</sup> (2) **CEWS recipients**, which are active businesses that had employees on their payroll during the pre-pandemic and early pandemic periods and received support from CEWS during the period of April to October 2020; and (3) inactive businesses, which are businesses that had workers on their payroll before the pandemic but did not have any workers on their payroll during the seven-month early pandemic period. Inactive businesses were ineligible for CEWS and therefore were not included in the following analysis on CEWS use.<sup>8</sup>

To better understand businesses' CEWS use, three measures are defined. The first is the **CEWS uptake rate**, which is calculated by dividing the number of CEWS recipient businesses by the number of active businesses (recipients plus non-recipients). The second measure is the **CEWS replacement rate**, which is calculated by dividing the total number of employees eligible for CEWS by the pre-pandemic employment among CEWS recipients only.<sup>9</sup> The CEWS replacement rate therefore shows the CEWS employee coverage rate among CEWS recipients, compared with their pre-pandemic employment level. The third measure is the **rehiring rate** among CEWS recipients, which is defined as the number of CEWS recipient businesses that rehired at least one employee for at least one CEWS application period divided by the total number of CEWS recipients.

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5. All CEWS program data from period 1 (March 15 to April 11 2020) to period 10 (November 22-December 19 2020) are available for analysis. However, the coverage may not be complete because businesses can apply for CEWS retroactively. Therefore, only data up to October 2020 were used.

6. Statistics Canada's payroll data are developed mostly from PD7 employer payroll tax files collected by the Canada Revenue Agency.

7. Having employees on the payroll during the pre-pandemic and early pandemic period means that a business had employees for at least one month during each period.

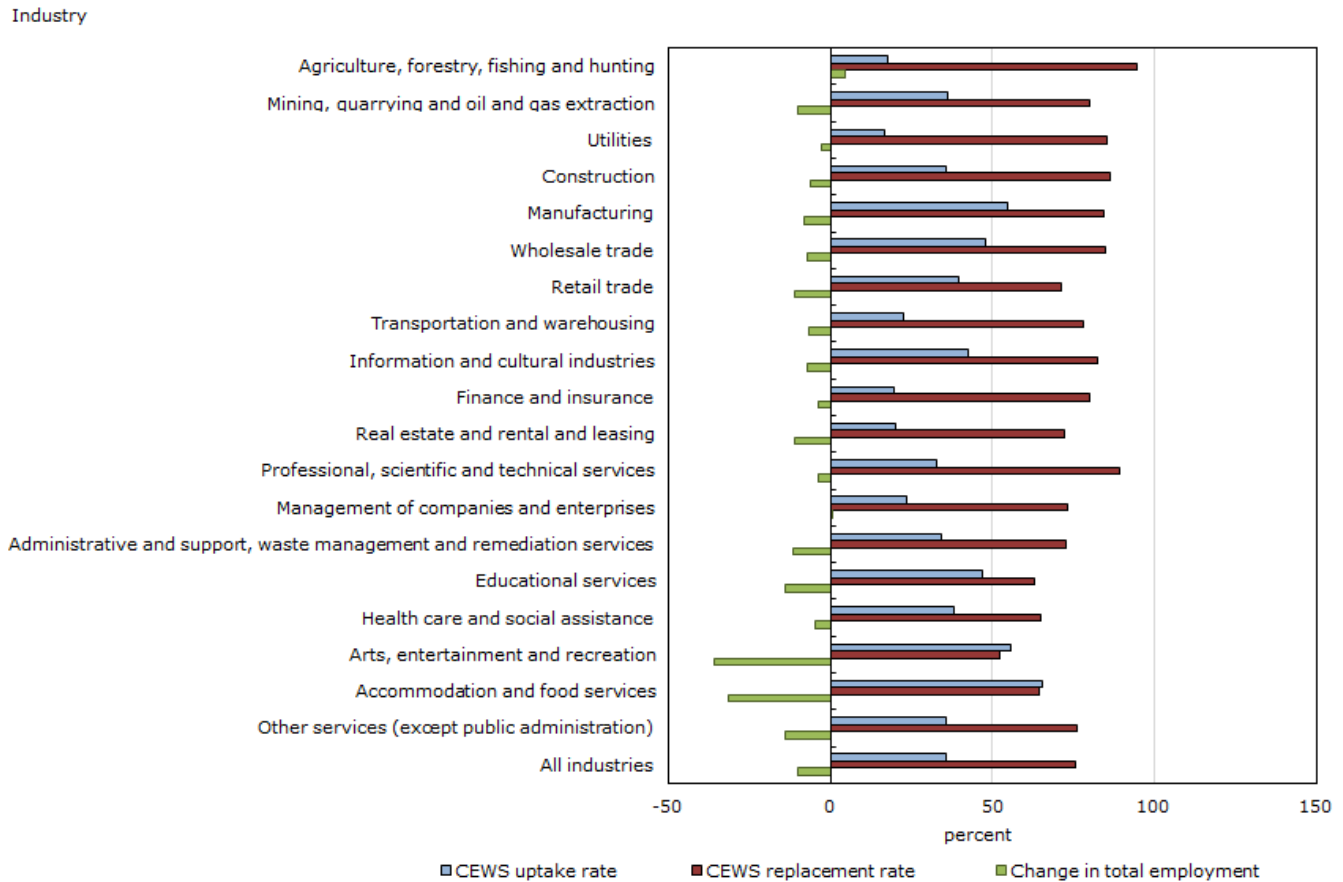
8. There were about 200,000 inactive businesses, which accounted for 16% of all businesses and 4% of all employment in the pre-pandemic period. They were much smaller on average before the pandemic than active businesses. A small proportion—about 5%—of businesses had payroll information for the early pandemic period but not the pre-pandemic period. These were not included in the analysis. In addition, a small proportion—about 2%—of CEWS applications could not be linked to the pre-pandemic period. These were also excluded.

9. Employees eligible for CEWS are calculated as the average across all periods for which a business applied. The CEWS application period is different from a calendar month; therefore, the average number of employees eligible for CEWS across periods may not align perfectly with the average monthly employment from the payroll data.

## Canada Emergency Wage Subsidy use by industry

Among active businesses, the CEWS uptake rate was about 36% across all industries (Chart 1). However, it varied across industries, with the highest rates recorded in accommodation and food services (66%); arts, entertainment and recreation (56%); and manufacturing (55%). The lowest rates were found in utilities (17%); agriculture, forestry, fishing and hunting (18%); and finance and insurance (19%).

**Chart 1**  
Canada Emergency Wage Subsidy uptake and replacement rates by industry



**Notes:** CEWS stands for the Canada Emergency Wage Subsidy. The CEWS uptake rate is the number of CEWS recipient businesses divided by the number of active businesses (recipients plus non-recipients). The CEWS replacement rate is the total number of employees eligible for CEWS divided by pre-pandemic (April 2019 to March 2020) employment among CEWS recipients only. The change in total employment is the percentage difference in employment between the pre-pandemic period (April 2019 to March 2020) and the early pandemic period (April to October 2020).  
**Source:** Statistics Canada, linked Canada Emergency Wage Subsidy and monthly payroll data.

This variation in uptake rate across industries is strongly related to industry-level employment changes from the pre-pandemic period to the early pandemic period.<sup>10</sup> For example, the utilities industry, which had the lowest uptake rate, experienced a modest decline of 3% from its pre-pandemic employment. The agriculture, forestry, fishing and hunting industry had the second-lowest uptake rate, and its employment experienced a 5% gain. In contrast, the arts, entertainment and recreation industry and the

10. The correlation coefficient for the uptake rate and the inter-period change in employment by industry is -0.73.

accommodation and food services industry had the largest declines in employment from their pre-pandemic levels, of 36% and 31%, respectively.<sup>11</sup>

Among CEWS recipient businesses, the replacement rate was 75% across all industries, suggesting that this proportion of pre-pandemic employment was covered by CEWS (Chart 1).<sup>12</sup> However, like the uptake rate, it varied widely among industries, reflecting employment changes among CEWS recipients between the two periods.<sup>13</sup> For example, CEWS recipients had the lowest replacement rate in the arts, entertainment and recreation industry (52%) and the accommodation and food services industry (64%). At the same time, CEWS recipients in these two industries experienced the largest declines in employment between the two periods, of 39% and 33%, respectively.

How did CEWS recipients differ from non-recipients? On average, CEWS recipients were larger than non-recipient businesses before the pandemic (Table 1). During the pre-pandemic period (April 2019 to March 2020), average monthly employment was 20.5 for CEWS recipients and 15.1 for non-recipients. This is also true across most industries. In the arts, entertainment and recreation industry and the accommodation and food services industry, CEWS recipients were about three times as large as non-recipient active businesses before the pandemic. A few exceptions include utilities, finance and insurance, educational services, and health care and social assistance. Some of these industries—such as utilities, educational services, and health care and social assistance—are usually dominated by large public institutions, which are not eligible for the subsidy.

Moreover, CEWS recipients experienced a decline in employment from the pre-pandemic period (April 2019 to March 2020) to the early pandemic period (April to October 2020) across almost all industries, while non-recipient active businesses experienced a smaller decline or positive growth (Table 1). On average, across all businesses, CEWS recipients experienced a decline in average monthly employment of 6.9%, while non-recipient active businesses experienced growth of 1.4%. In the hard-hit accommodation and food services industry, CEWS recipients experienced a large decline of 23.8%; non-recipient active businesses experienced a decline of 11.5%. The only industries where CEWS recipients experienced employment growth were agriculture, forestry, fishing and hunting; utilities; construction; and professional, scientific and technical services.

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11. Percentage changes in employment are based on monthly payroll data and may differ from those calculated using other data sources, such as the Labour Force Survey and the Survey of Employment, Payrolls and Hours. For a given industry, pre-pandemic employment is the sum of average monthly employment in the pre-pandemic period. Likewise, employment in the early pandemic period is the sum of average monthly employment in that period.

12. The replacement rate is about the level of total employment before and during the pandemic. No information is available yet on individual employees employed by CEWS recipients.

13. The correlation coefficient for the replacement rate and the inter-period change in employment among CEWS recipients by industry is 0.92.

**Table 1**  
**Characteristics of Canada Emergency Wage Subsidy recipients and non-recipients by industry**

Industry	Non-recipients		Canada Emergency Wage Subsidy recipients	
	Average monthly employment (April 2019 to March 2020)	Percentage change in average monthly employment (from the period from April 2019 to March 2020 to the period from April to October 2020)	Average monthly employment (April 2019 to March 2020)	Percentage change in average monthly employment (from the period from April 2019 to March 2020 to the period from April to October 2020)
Agriculture, forestry, fishing and hunting	4.8	8.1	10.5	9.0
Mining, quarrying, and oil and gas extraction	15.7	4.1	64.4	-8.0
Utilities	180.4	4.1	26.6	7.0
Construction	5.2	3.7	14.2	0.0
Manufacturing	27.1	1.6	43.3	-7.0
Wholesale trade	14.9	0.6	25.2	-6.0
Retail trade	18.7	-2.1	24.9	-11.0
Transportation and warehousing	10.1	1.2	26.1	-5.0
Information and cultural industries	26.1	4.4	43.8	-2.0
Finance and insurance	36.4	4.0	17.7	-1.0
Real estate and rental and leasing	4.8	2.5	14.7	-5.0
Professional, scientific and technical services	6.9	2.1	11.4	1.0
Management of companies and enterprises	51.7	5.2	72.1	-7.0
Administrative and support, waste management and remediation services	15.1	4.6	28.1	-5.0
Educational services	189.8	-5.3	19.5	-13.0
Health care and social assistance	22.8	-1.8	13.0	-9.0
Arts, entertainment and recreation	8.3	-1.1	27.7	-12.0
Accommodation and food services	9.9	-11.5	26.5	-24.0
Other services (except public administration)	5.4	-1.6	10.3	-8.0
All industries	15.1	1.4	20.5	-6.9

**Source:** Statistics Canada, linked Canada Emergency Wage Subsidy and monthly payroll data.

## Canada Emergency Wage Subsidy use by business size

Some distinct patterns in use rates also appear when businesses are distinguished by employment size (as measured by average monthly employment in the pre-pandemic period). The CEWS uptake rate is not monotonic with employment size (Chart 2). It was highest among businesses with 10 to 49 employees, at 62%, and lowest among businesses with fewer than 10 employees, at 29%. However, among businesses with more than 10 employees, the uptake rate decreased with employment size.

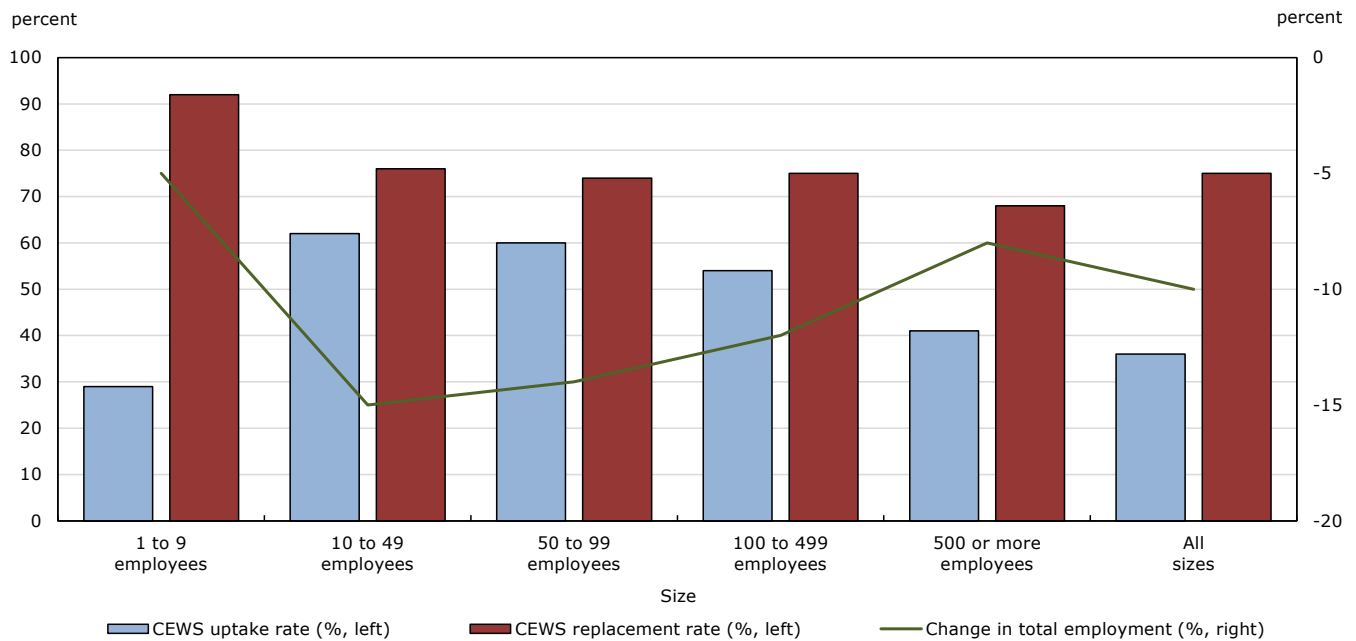
This pattern is generally consistent with employment changes from the pre-pandemic period to the early pandemic period across employment size groups.<sup>14</sup> For example, among businesses with fewer than 10 employees, where the uptake rate was the lowest, employment experienced the smallest decline (5%). In contrast, employment experienced the largest decline (15%) among businesses with 10 to 49 employees, accompanying the highest uptake rate. Among businesses with more than 10 employees, the decline in employment became smaller as employment size increased.

14. The correlation coefficient for the uptake rate and the inter-period change in employment by business size is -0.99.



Among CEWS recipients, the replacement rate decreased with employment size. While the uptake rate was lowest among businesses with fewer than 10 employees, the replacement rate was 92% for CEWS recipients in this size group. This means that 92% of pre-pandemic employment was covered by CEWS. The replacement rate was lowest among the largest employers (those with more than 500 employees), at 68%. This pattern partly reflects the greater decline in employment experienced by larger CEWS recipient businesses between the two periods.<sup>15</sup>

**Chart 2**  
Canada Emergency Wage Subsidy uptake and replacement rates by employment size



**Notes:** CEWS stands for the Canada Emergency Wage Subsidy. The CEWS uptake rate is the number of CEWS recipient businesses divided by the number of active businesses (recipients plus non-recipients). The CEWS replacement rate is the total number of employees eligible for CEWS divided by pre-pandemic (April 2019 to March 2020) employment among CEWS recipients only. The change in total employment is the percentage difference in employment between the pre-pandemic period (April 2019 to March 2020) and the early pandemic period (April to October 2020).

**Source:** Statistics Canada, linked Canada Emergency Wage Subsidy and monthly payroll data.

**Table 2**  
Characteristics of Canada Emergency Wage Subsidy recipients and non-recipients by employment size

Employment size (April 2019 to March 2020)	Non-recipients		Canada Emergency Wage Subsidy recipients	
	Average monthly employment (April 2019 to March 2020)	Percentage change in average monthly employment (from the period from April 2019 to March 2020 to the period from April to October 2020)	Average monthly employment (April 2019 to March 2020)	Percentage change in average monthly employment (from the period from April 2019 to March 2020 to the period from April to October 2020)
1 to 9 employees	2.6	2.4	4.1	-1.1
10 to 49 employees	20.2	-6.9	20.9	-17.7
50 to 99 employees	69.4	-3.5	68.4	-20.4
100 to 499 employees	196.8	-4.1	189.4	-19.2
500 or more employees	2,915.0	-6.2	1,607.2	-19.9

**Source:** Statistics Canada, linked Canada Emergency Wage Subsidy and monthly payroll data.

15. For example, among CEWS recipients, employment declined by 9% between the two periods for business with fewer than 10 employees and about 20% for larger businesses.

Unlike the differences observed by industry, CEWS recipients did not differ much from active non-recipients in terms of pre-pandemic employment within the same size group, except for the largest size group (Table 2). In this group, CEWS recipients were significantly smaller than non-recipients before the pandemic, with 1,607 employees versus 2,915 employees. However, CEWS recipients experienced a larger decline in employment between the two periods than non-recipients across all size groups, and the decline was smallest in the smallest size group.

## Rehiring rates among Canada Emergency Wage Subsidy recipients by industry

One of CEWS's objectives is to encourage recipients to rehire employees who have been laid off or furloughed. The rehiring rate, or the share of businesses among CEWS recipients that rehired at least one employee for at least one application period from April to October 2020, was 23%.<sup>16</sup> Like uptake rates, rehiring rates exhibit a strong negative relationship with changes in employment among CEWS recipients across industries (Chart 3).<sup>17</sup> For example, the industries with the highest rehiring rates include accommodation and food services (37%); educational services (27%); and arts, entertainment and recreation (25%). CEWS recipients in these three industries also had the largest declines in employment from the pre-pandemic period to the early pandemic period, of 33%, 24% and 39%, respectively.

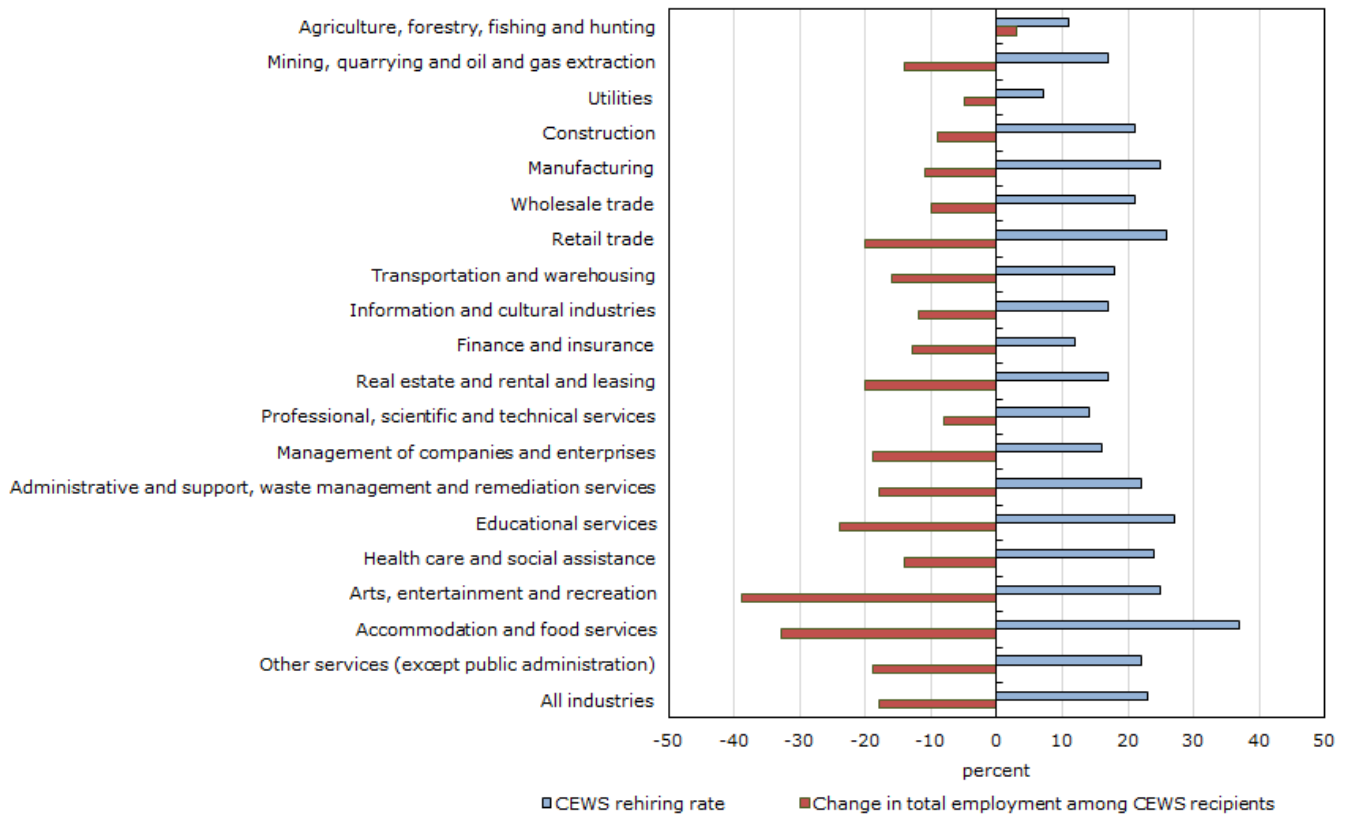
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16. Employees must be rehired and paid before they can be included in CEWS claims.

17. The correlation coefficient for the rehiring rate and the inter-period change in employment among CEWS recipients by industry is -0.72.

**Chart 3**  
**Rehiring rates and changes in employment among Canada Emergency Wage Subsidy recipients by industry**

Industry



**Notes:** CEWS stands for the Canada Emergency Wage Subsidy. The CEWS rehiring rate is the number of CEWS recipient businesses that rehired at least one employee for at least one CEWS application period divided by the total number of CEWS recipients. The change in total employment among CEWS recipients is the percentage difference in employment between the pre-pandemic period (April 2019 to March 2020) and the early pandemic period (April to October 2020) among CEWS recipients only.  
**Source:** Statistics Canada, linked Canada Emergency Wage Subsidy and monthly payroll data.

The CEWS recipients that rehired employees were larger before the pandemic on average than those that did not rehire employees, with 24.1 employees versus 19.5 (Table 3). This is also true across almost all industries. However, rehiring CEWS recipients experienced a larger decline in average monthly employment than non-rehiring CEWS recipients, across almost all industries. Across all industries, average monthly employment declined by 11.5% for rehiring CEWS recipients, compared with 5.5% for non-rehiring CEWS recipients.

**Table 3**  
**Characteristics of rehiring and non-rehiring Canada Emergency Wage Subsidy recipients by industry**

Industry	Canada Emergency Wage Subsidy recipients			
	Non-rehiring		Rehiring	
	Average monthly employment (April 2019 to March 2020)	Percentage change in average monthly employment (from the period from April 2019 to March 2020 to the period from April to October 2020)	Average monthly employment (April 2019 to March 2020)	Percentage change in average monthly employment (from the period from April 2019 to March 2020 to the period from April to October 2020)
Agriculture, forestry, fishing and hunting	10.3	9.1	11.7	10.4
Mining, quarrying, and oil and gas extraction	62.9	-6.7	71.6	-13.4
Utilities	26.6	8.3	26.8	-8.2
Construction	13.9	0.8	15.2	-1.5
Manufacturing	42.9	-5.9	44.6	-9.7
Wholesale trade	24.6	-5.3	27.4	-9.9
Retail trade	25.2	-9.7	24.0	-12.9
Transportation and warehousing	20.7	-4.3	50.8	-7.8
Information and cultural industries	44.2	-0.1	42.2	-10.1
Finance and insurance	16.5	0.2	26.6	-5.9
Real estate and rental and leasing	13.7	-4.0	19.8	-8.2
Professional, scientific and technical services	11.0	1.2	13.8	-1.7
Management of companies and enterprises	67.5	-6.6	96.7	-9.2
Administrative and support, waste management and remediation services	28.0	-3.9	28.6	-8.2
Educational services	19.1	-11.4	20.5	-17.1
Health care and social assistance	12.7	-7.5	13.8	-12.4
Arts, entertainment and recreation	22.1	-10.8	44.5	-16.6
Accommodation and food services	25.1	-23.1	28.8	-24.9
Other services (except public administration)	9.7	-7.1	12.5	-10.7
All industries	19.5	-5.5	24.1	-11.5

**Source:** Statistics Canada, linked Canada Emergency Wage Subsidy and monthly payroll data.

## Conclusion

This article presented information about employer businesses' use of the Canada Emergency Wage Subsidy (CEWS) program during the early pandemic period (from April to October 2020). It found that 36% of active employer businesses received support from CEWS during this period overall. However, use varied across industries. It was highest in accommodation and food services (66%); arts, entertainment and recreation (56%); and manufacturing (55%). It was lowest in utilities; agriculture, forestry, fishing and hunting; and finance and insurance.

CEWS use also differed by business size. It was highest among business with 10 to 49 employees (62%) and lowest among business with fewer than 10 employees (29%). These patterns of CEWS use by

industry and size are negatively related to employment changes from the pre-pandemic period to the early pandemic period by industry and size.

While the overall uptake rate was relatively low, the replacement rate (i.e., the percentage of pre-pandemic employment among CEWS recipients covered under the CEWS) was high—75% on average across all industries. Among CEWS recipients, 23% rehired at least one employee. It is possible that many employees who were not rehired by CEWS recipients received support from other government programs, such as the Canada Emergency Response Benefit. CEWS recipients that did not rehire any employees may still face a great deal of uncertainty with respect to demand and recovery.

The analysis also showed that CEWS recipients were larger employers on average before the pandemic, and they experienced a larger decline in employment because of the pandemic. Future analysis will be devoted to understanding what business characteristics, in addition to employment and industry—such as productivity, liability, innovation and diversity—are associated with business survival and use of government support, and how government support is helping businesses weather the pandemic.

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