

A Summary of COVID-19 Pandemic Assistance to US Forest Products Companies

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Abstract

Forest products and timber harvesting businesses were severely affected by the COVID-19 pandemic. This article describes how forest products companies used Paycheck Protection Program (PPP) loans to keep over 487,000 workers in the forest industry on payroll through the pandemic. This article also summarizes the Pandemic Assistance for Timber Harvesters and Haulers (PATHH) program, payments provided to timber harvesting and hauling businesses that experienced losses in revenue in 2020. Timber harvesting and hauling companies that received a PATHH payment reported US\$1.27 trillion in total revenue lost between 2019 and 2020 because of the COVID-19 pandemic.

The COVID-19 pandemic led to drastic and immediate impacts to economies across the globe. The pandemic reduced global economic growth in 2020 by an annual rate of 3.2 percent (Congressional Research Service 2021), reduced employment, and brought challenges to supply chains. In response, governments implemented fiscal and monetary policies to address the economic impacts of the pandemic. One such example is the Paycheck Protection Program (PPP) administered through the US Small Business Administration (SBA; US SBA 2022a). Beginning in April 2020, this loan program was created in response to the COVID-19 pandemic by providing loans to businesses to keep their workers on payroll, with many borrowers eligible for loan forgiveness. In total, nearly US\$800 billion dollars were allocated to US companies as a part of the PPP and as of July 2022, 94 percent of all PPP loans have been fully or partially forgiven (US SBA 2022c). Funds for the PPP loan program were exhausted in May 2021.

The Pandemic Assistance for Timber Harvesters and Haulers (PATHH) program provided relief to timber harvesting and timber hauling businesses that experienced a gross revenue loss of more than 10 percent in 2020 compared with 2019 levels (USDA 2022). Administered through the Farm Service Agency in partnership with the US Department of Agriculture-Forest Service, applications for the PAATH program were received between July 2021 and October 2021, providing up to \$200 million to these businesses in the form of direct payments. Payments to all businesses were set at a maximum of \$75,000.

The last major downturn to the US forest products sector was likely the Great Recession, which led to a loss of 1.1 million jobs across six forestry sectors (Woodall et al. 2011). Understanding the effects of COVID-19 and the

details of pandemic relief payments can lead to a better understanding of the economic impacts of this global health pandemic on US forest products companies and their subsequent recovery. This article summarizes data on PPP loans and PATHH payments provided to US forest products and timber harvesting businesses.

Materials and Methods

PPP data

Data on PPP loans were acquired from the US SBA website (US SBA 2022a; last updated January 2, 2022). In total, nearly 12 million loans were approved across all sectors through the PPP (US SBA 2022b). To identify forest products companies, the North American Industry Classification System (NAICS) codes were obtained as a subset of the Agriculture, Forestry, Fishing, and Hunting, and Manufacturing industry titles. These represented 28 different industries including forest nurseries and gathering of forest products; logging; converted paper product manufacturing; pulp, paper, and paperboard mills; veneer, plywood, and engineered wood product manufacturing, other wood product manufacturing; and support activities for forestry. Key variables analyzed from the PPP data included company location (e.g., state), NAICS industry classification, total loan value, and number of jobs supported by the loan.

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PATHH data

Data were acquired from a Freedom of Information Act request to the US Department of Agriculture, with data delivered to the author on August 22, 2022. Key variables analyzed from the PATHH data included company location (e.g., state), business type (i.e., timber harvester, timber hauler, or both), application status (i.e., approved or not approved), total amount paid, and gross revenue lost in 2020 compared with 2019.

Analysis

Descriptive statistics were summarized for the PPP and PATHH data independently and analyzed using R Program software (R Core Team 2022). Total and mean values were summarized for each program by US state. A map was produced for each program, which showed continuous values for total loan amounts acquired in each state using the `plot_usmap` package (Di Lorenzo 2022). For the PPP data, correlations were performed between loan amounts and number of jobs supported.

Results

PPP

Forest products companies received 35,474 loans for a total of \$4.7 billion through the PPP program from April 2020 to May 2021. The SBA provided PPP loans through three rounds between April 3, 2020 and April 16, 2020 (Round 1), April 27 and August 8, 2020 (Round 2), and December 27, 2020 and May 5, 2021 (Round 3). The majority of PPP loans (46%) were provided in the third round of funding. Elsewhere, 26 percent and 29 percent of loans were provided in the first and second rounds of funding, respectively. There were 8,245 second-draw loans from forest products companies that received a previous loan, or 30 percent of all loans. Logging and other wood product manufacturing companies received 68 percent of all PPP loans ($n = 24,235$) provided to all forest products companies. Corrugated and solid fiber box manufacturing, and paper bag and coated and treated paper manufacturing, received the largest loan amounts, exceeding \$400,000 on average (Table 1).

The number of forest industry jobs reported in PPP loan applications was positively related to loan amounts ($P < 0.001$, $R^2 = 0.800$). Most applications reported that the PPP

loan would support fewer than 20 jobs with loans amounts $< \$200,000$. PPP loans provided to logging companies supported the greatest number of jobs (65,438) across all forest industries. Loan amounts to specific logging companies supported the smallest number of jobs on average; however, $> 12,000$ loans were provided to this industry. Corrugated and solid fiber box manufacturers, paper bag, coated and treated paper manufacturers, and truss manufacturers reported the greatest number of jobs on average supported through the PPP loan program (Table 1).

The majority of PPP loans (61%) were provided to forest product companies at an amount $< \$50,000$. Loans $> \$350,000$ represented 61 percent of the total approved value of loans to all forest products companies. California forest products companies received the greatest number of loans (2,019) and the largest amount (\$358 million) across all US states. Seven other states received in excess of \$200 million each in PPP loans to forest products companies: Oregon, Pennsylvania, Ohio, Texas, New York, Wisconsin, and Michigan (Fig. 1). New Jersey saw the greatest average loan value at \$249,013 ($n = 468$).

PATHH program

Timber harvesting and hauling companies received 5,093 payments for a total of \$197.4 million through the PATHH program between July 2021 and October 2021. The overall approval rate was 90.8 percent. Timber harvesters received most payments (45.2%) while timber haulers received the fewest (22.3%) and least total amount of payments. Companies that identified as both timber harvesters and haulers received the greatest average payment values (\$45,359; Table 2).

Timber harvesting and hauling companies that received a PATHH payment reported \$1.27 trillion in total revenue lost between 2019 and 2020 as a result of the COVID-19 pandemic. Across the three business types, companies that identified as operating as both timber harvesters and haulers reported the greatest total and average revenue lost in their business between 2019 and 2020. These companies reported an average gross revenue loss of \$350,920 across the 1,654 companies (Table 2).

Mississippi companies received the greatest number of payments (393) and the largest amount (\$15.7 million) across all US states. Six other states received in excess of \$10 million each in PATHH payment to timber harvesting

Table 1.—Mean value and number of jobs supported by Paycheck Protection Program (PPP) loans provided to US forest products companies by North American Industry Classification System industry categories. USD is US currency, in dollars.

Industry	No. loans	Mean loan value (USD)	Total loan value (USD, millions)	Mean no. jobs	Total no. jobs
Logging	12,401	50,793	629.9	5.3	65,438
All other miscellaneous wood-product manufacturing	4,496	113,353	509.6	12.2	54,918
Wood container and pallet manufacturing	2,276	167,078	380.3	21.7	49,436
Sawmills	2,106	187,306	394.5	20.2	42,643
Support activities for forestry	3,428	73,507	252.0	8.8	30,035
Other millwork (including flooring)	2,015	144,846	291.9	14.6	29,458
Corrugated and solid fiber box manufacturing	713	456,261	325.3	39.9	28,446
Wood window and door manufacturing	1,313	206,045	270.5	19.4	25,520
All other converted paper product manufacturing	589	310,425	182.8	28.7	16,892
Paper bag and coated and treated paper manufacturing	448	408,196	182.9	37.1	16,605
Hardwood veneer and plywood manufacturing	493	285,075	140.5	31.4	15,479
Truss manufacturing	429	305,422	131.0	34.8	14,924

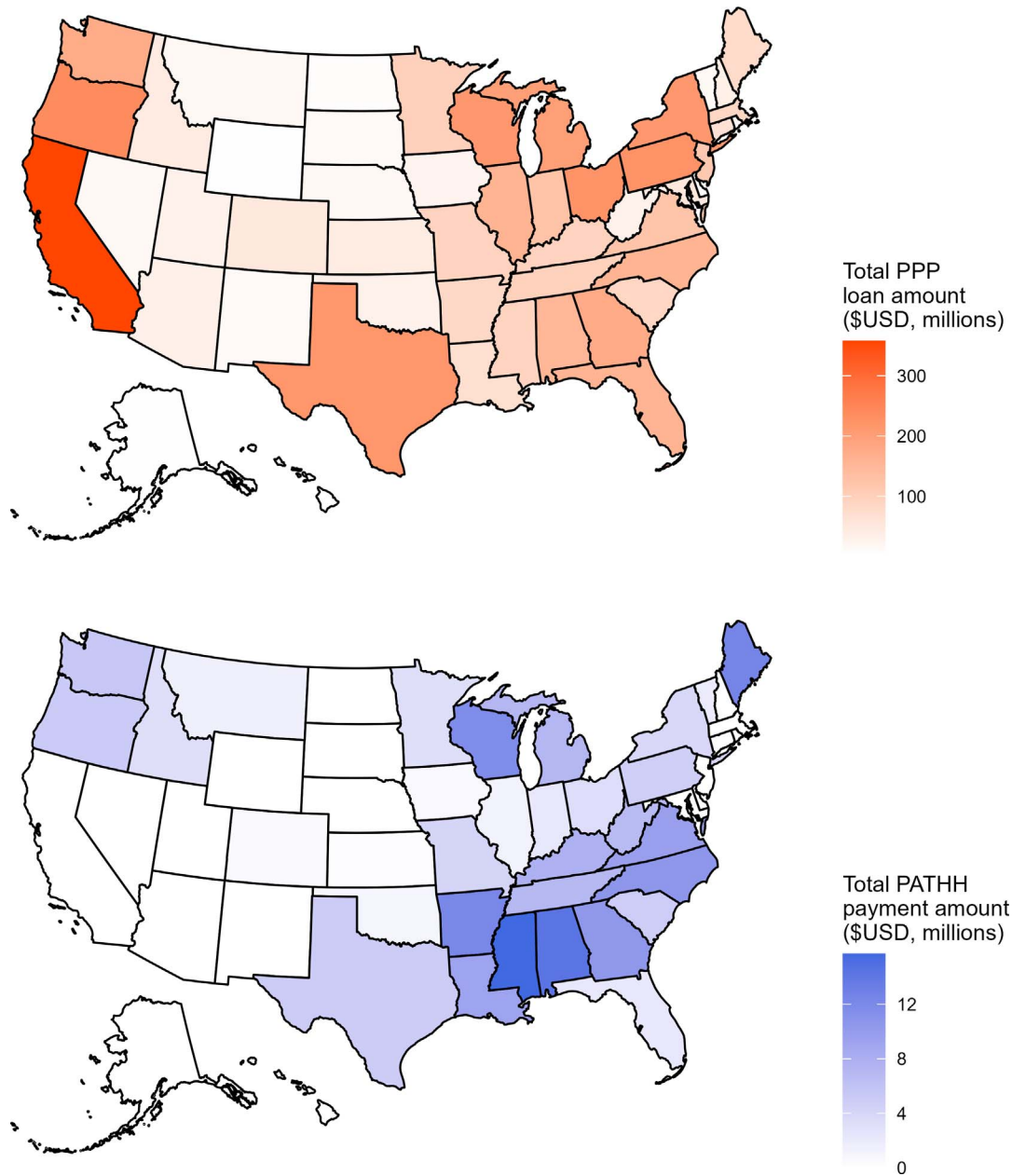


Figure 1.—Total value of Paycheck Protection Program (PPP) loans and Pandemic Assistance for Timber Harvesters and Haulers (PATHH) payments provided to forest products and timber harvesting companies by US state.

and hauling companies: Alabama, Maine, Arkansas, Wisconsin, North Carolina, and Georgia. Washington saw the greatest average payment at \$65,831 and also reported a high average revenue lost in their business (\$419,403; $n = 82$; Table 3; Fig. 1).

Discussion

The large number of applications for pandemic assistance programs indicates the tremendous impact that COVID-19 had on forest products and timber harvesting businesses.

Table 2.—Mean value of approved Pandemic Assistance for Timber Harvesters and Haulers (PATHH) payments provided to US timber harvester and hauler businesses. USD is US currency, in dollars.

Business type	No. loans	Mean payment value (USD)	Total payment value (USD, millions)	Avg gross revenue lost, 2019–2020 (USD)	Total gross revenue lost, 2019–2020 (USD, millions)
Harvester (only)	2,302	38,220	88.0	243,193	559.8
Hauler (only)	1,137	30,233	34.4	116,251	132.2
Harvester and hauler	1,654	45,359	75.0	350,920	580.4

Table 3.—Mean and total value of approved Paycheck Protection Program (PPP) loans and Pandemic Assistance for Timber Harvesters and Haulers (PATHH) payments provided to forest products and timber harvesting and hauling businesses in each US state. USD is US currency, in dollars.

State name	PPP					PATHH				
	No. loans	Mean loan value (USD)	Total loan value (USD, millions)	Mean no. jobs	Total no. jobs	No. loans	Mean payment value (USD)	Total payment value (USD, millions)	Mean gross revenue lost, 2019–2020 (USD)	Total gross revenue lost, 2019–2020 (USD, millions)
Alabama	1,373	110,909	152.3	11.8	16,262	344 ^a	41,706 ^b	14.3	357,747	123.1
Alaska	73	66,156	4.8	6.9	506	—	—	—	—	—
Arizona	241	142,234	34.3	19.6	4,731	—	—	—	—	—
Arkansas	1,119	73,445	82.2	8.5	9,537	304	40,237	12.2	336,774	102.4
California	2,019	177,243	357.9	17.7	35,775	—	—	—	—	—
Colorado	401	127,407	51.1	12.6	5,059	14	37,918	0.5	174,153	2.4
Connecticut	326	192,942	62.9	14.4	4,681	8	30,083	0.2	86,954	0.7
District of Columbia	12	240,649	2.9	18.8	226	—	—	—	—	—
Delaware	40	163,570	6.5	16.6	662	—	—	—	—	—
Florida	1,422	110,818	157.6	12.5	17,771	52	44,551	2.3	341,702	17.8
Georgia	1,512	116,427	176.0	13.3	20,155	234	44,606	10.4	368,527	86.2
Hawaii	79	46,723	3.7	4.9	386	—	—	—	—	—
Idaho	420	108,448	45.5	12.4	5,210	78	39,425	3.1	237,083	18.5
Illinois	980	162,347	159.1	15.5	15,184	39	33,282	1.3	189,523	7.4
Indiana	730	175,005	127.8	18.0	13,138	58	39,018	2.3	202,758	11.8
Iowa	338	73,246	24.8	8.3	2,814	22	33,020	0.7	104,676	2.3
Kansas	191	222,585	42.5	20.1	3,843	6	32,220	0.2	79,369	0.5
Kentucky	1,032	91,299	94.2	10.6	10,945	283	27,200	7.7	87,940	24.9
Louisiana	784	89,546	70.2	9.8	7,661	220	41,970	9.2	415,755	91.5
Maine	838	92,246	77.3	10.4	8,720	353	35,303	12.5	261,106	92.2
Maryland	269	183,729	49.4	17.5	4,715	—	—	—	—	—
Massachusetts	412	208,877	86.1	16.9	6,964	—	—	—	—	—
Michigan	1,251	160,415	200.7	16.8	20,959	189	38,044	7.2	183,934	34.8
Minnesota	835	117,048	97.7	11.7	9,804	94	33,299	3.1	135,395	12.7
Mississippi	1,348	66,675	89.9	8.3	11,239	393	40,048	15.7	306,589	120.5
Missouri	1,409	67,140	94.6	7.4	10,468	123	33,170	4.1	109,484	13.5
Montana	305	64,454	19.7	7.4	2,266	35	43,572	1.5	387,992	13.6
Nebraska	141	127,184	17.9	14.2	1,999	—	—	—	—	—
New Hampshire	291	120,995	35.2	10.4	3,034	—	—	—	—	—
New Mexico	105	122,608	12.9	15.8	1,655	—	—	—	—	—
New York	1,290	167,045	215.5	16.6	21,392	104	36,088	3.8	167,660	17.4
North Carolina	1,232	128,518	158.3	14.3	17,565	281	37,712	10.6	48,696	13.7
North Dakota	60	131,245	7.9	13.4	806	—	—	—	—	—
New Jersey	468	249,013	116.5	21.7	10,174	—	—	—	—	—
Nevada	122	141,099	17.2	15.0	1,824	—	—	—	—	—
Ohio	1,075	206,680	222.2	21.6	23,257	75	43,646	3.3	199,678	15.0
Oklahoma	387	76,107	29.5	9.4	3,651	39	26,675	1.0	162,135	6.3
Oregon	1,007	235,947	237.6	22.7	22,909	112	45,175	5.1	419,403	47.0
Pennsylvania	1,377	162,519	223.8	15.9	21,877	121	38,680	4.7	207,649	25.1
Puerto Rico	102	57,670	5.9	12.6	1,287	—	—	—	—	—
Rhode Island	100	194,368	19.4	20.3	2,033	—	—	—	—	—
South Carolina	634	137,419	87.1	14.8	9,400	117	41,643	4.9	318,679	37.3
South Dakota	151	81,426	12.3	8.4	1,263	—	—	—	—	—
Tennessee	1,278	74,934	95.8	8.7	11,059	203	34,533	7.0	156,536	31.8
Texas	1,601	136,047	217.8	14.5	23,274	133	37,679	5.0	294,445	39.2
Utah	214	135,605	29.0	16.7	3,570	—	—	—	—	—
Vermont	302	53,697	16.2	5.3	1,604	51	37,247	1.9	135,089	6.9
Virginia	894	138,258	123.6	15.4	13,755	244	39,448	9.6	274,325	66.9
Washington	878	197,541	173.4	16.8	14,721	82	65,831	5.4	312,365	25.6
West Virginia	388	76,920	29.8	9.6	3,720	190	35,972	6.8	108,678	20.6
Wisconsin	1,534	139,432	213.9	13.9	21,320	299	38,940	11.6	135,936	40.6
Wyoming	79	58,585	4.6	6.7	526	—	—	—	—	—

^a Data for states with <5 approved loans not shown.

^b Dashes indicate <5 business reported and are not shown.

Foresters, timber harvesters and haulers, and wood products manufacturers were considered essential workers under the food and agriculture workforce category during the early phase of the pandemic in 2020 (Centers for Disease Control and Prevention 2020), but few sectors within the forest products industry were completely shut down.

The amounts provided by PPP loans were generally higher compared with PATHH payments, likely a reflection of greater funding available through the PPP, the \$75,000 maximum payment provided in the PATHH program, and larger companies that applied to the PPP program. Several forest products industries reported an average PPP loan value in excess of \$400,000 and supported an average of nearly 40 jobs within a company. Examples of these companies include ones that were essential throughout the pandemic as consumers relied heavily on shipping and e-commerce during the pandemic (e.g., corrugated and solid fiber box manufacturing, and paper bag and coated and treated paper manufacturing; Table 1). Logging businesses received the largest number of PPP loans and their average value (\$50,793) was slightly less than those provided to timber harvesters and haulers through the PATHH program (range from \$30,233 to \$45,359).

The distribution of PPP loans and PATHH payments to each US state generally agreed with the amount of gross domestic production (GDP) within the forestry sector in that state. Western states with a large amount of forest generally received large amounts of PPP loans (e.g., California, Oregon), while states in the southern United States received large amounts of PATHH payments (e.g., Mississippi, Alabama). Compared with Pelkki and Sherman's (2020) prepandemic report on each state's economic contribution from the forest industry, 2 states that ranked in the top 10 for total contribution of forestry to a state's GDP in 2016 also ranked in the top 10 for total PPP loans and PATHH payments (Wisconsin and Georgia). Western states (e.g., California, Oregon, and Washington) obtained a large portion of PPP loans relative to other states. Three states in the south (Mississippi, Alabama, and Arkansas) and two in the north (Maine and Wisconsin) received approximately one-third (33.6%) of all payments in the PATHH program.

Conclusions

Forest products and timber harvesting and hauling businesses secured nearly \$5 billion of federal funds

available through the PPP and PATHH programs to combat economic challenges presented by the COVID-19 pandemic. Over 35,000 PPP loans were acquired by forest products companies in the United States from April 2020 through May 2021 that helped keep 487,000 workers on payroll. As a result of the pandemic, timber harvesting and hauling companies reported \$1.27 trillion in total revenue lost alone. While the \$200 million in payments provided by the PATHH program represented a small portion of revenue lost, economic assistance programs may have helped companies remain viable to address the economic challenges brought by the COVID-19 pandemic.

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