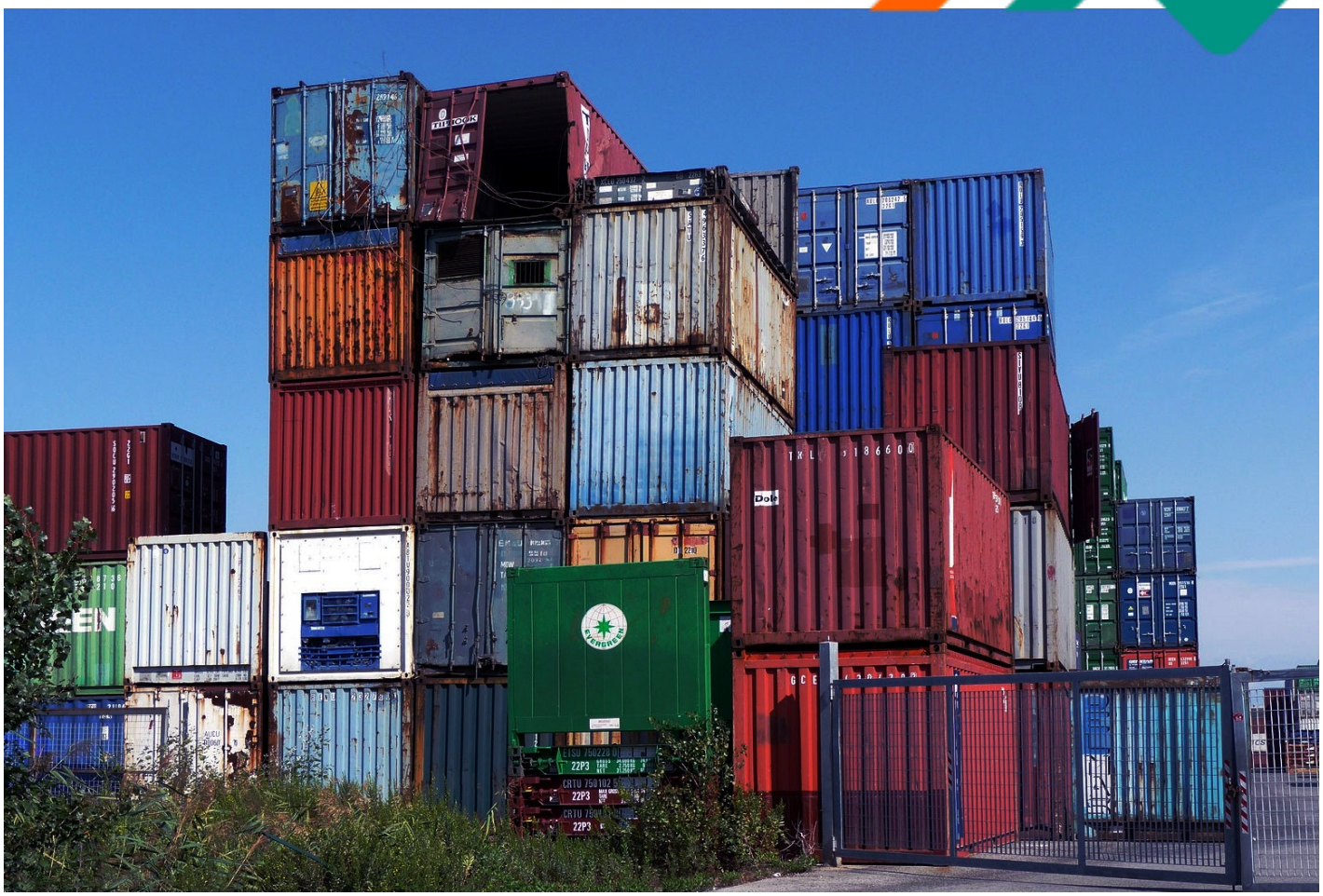

Special Drawing Rights Could Help Recover Millions of Export-Related US Jobs, and Create Even More

Reduced Demand from Developing Countries During the Pandemic and World Recession Led to Significant American Job Losses

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Executive Summary

This paper examines the effect of the COVID-19 pandemic, and the resulting world recession, on US export-related jobs. It argues that an additional, and larger, issuance of Special Drawing Rights — reserve assets at the International Monetary Fund — would help bring those jobs back, and create more.

Since the beginning of the pandemic, lockdowns and other containment measures, as well as their effects on certain sectors of the US economy, have been the focus of much analysis. Millions of jobs were lost as businesses that focused on, for example, the retail trade and tourism, shuttered.

One less-examined aspect of the pandemic has been the effect of declining external aggregate demand on US industries and sectors that depend on exports. Not only were these businesses hurt by containment measures and other effects of the virus in the United States itself, they have faced reduced demand for their goods and services from the rest of the world.

Many low- and middle-income countries have experienced more severe economic crises due to the pandemic than high-income countries, and thus have imported less from countries like the United States. This has led to the temporary loss of millions of export-related jobs in the United States.

This falloff in demand also means that the rate of the return of US export-related jobs — those both directly and indirectly involved in the production of exports — is dependent upon a broad economic recovery in the rest of the world.

Special Drawing Rights, which are cost-free for the United States, can help boost global demand for US exports by improving the financial position of low- and middle-income countries. Increased demand for US exports would bring these export-related jobs back more quickly, as well as put the US economy on a path to creating more export-related jobs over the next five years. The US economy is still down about 6.5 million jobs from its pre-pandemic level of employment, and 9.2 million below the pre-pandemic trend.

This paper's findings include:

- As compared to 2019 as a baseline, US exports in goods and services declined by 16.0 percent in 2020.
- Even with a strong rebound of some exports with the latest 2021 data, the total value of lost US exports from January 2020 to May 2021 is over $429 billion.
- This loss of export earnings due to the pandemic and world recession suggests a loss of over 2.2 million export-related jobs, using the methodology that the US Department of Commerce employs to estimate the relationship between exports and employment.
- Jobs related to the export of goods are a significant percentage of many states' total employment, representing over 5 percent of total employment in 13 states.
- The implied loss of jobs due to a loss of goods exports was significant for many states, with 21 states losing over 10,000 jobs. Texas lost the most jobs with 167,000; South Carolina had the largest drop in percentage terms: 3.1 percent of total state employment (68,000 jobs). These export-related job losses can represent a large portion of the total loss in employment from January 2020 to May 2021 for some states.
- If the 2.2 million export-related jobs return at a faster pace than they are currently, hundreds of thousands of additional jobs could be created.
- In 2019, 38 states exported at least 25 percent of their goods exports, by value, to low- and middle-income countries (excluding China). By the same metric, eight states exported at least 50 percent.

Introduction

Much of the analysis of the economic effects of the COVID-19 pandemic in the United States has focused on the impact of local and state containment and social distancing measures on broad sectors of the economy, particularly on the retail and services sectors, and the millions of jobs that were lost as a result of these measures. There has been far less discussion, however, of the significant decline in US export earnings prompted by the dire economic effects of the pandemic in the rest of the world, and the high number of export-related jobs that have been lost in the United States as a result. The following issue brief looks at how the global pandemic has led to significant losses of jobs in the US economy, and how International Monetary Fund (IMF) reserve assets known as Special Drawing Rights (SDRs) can help boost global demand for US exports and bring these jobs back more quickly, as well as put the US economy on a path to creating more export-related jobs over the next five years.

The Impact of the Global Pandemic on US Exports and Export-Related Jobs

In 2019, exports from the United States were valued at nearly $2.27 trillion: over $1.39 trillion worth of goods and over $876 billion worth of services.[1] Due to the ongoing effects of the pandemic and world recession, US exports have been lower than the 2019 baseline in almost every month since January 2020, with a significant recovery of exports in goods in the most recent three months.

In 2020, total exports declined by 16.0 percent to $1.91 trillion. Disaggregated, exports in goods fell to $1.20 trillion (a 13.8 percent decline), while exports in services dropped to $705 billion (a 19.5 percent decline). Compared to 2019, exports in 2020 dropped by over $362 billion (a $192 billion loss in goods exports and a $171 billion loss in services exports). Including the latest available 2021 data, this represents a total loss of about $429 billion —

1 US Census Bureau Foreign Trade Division (2021) and USA Trade Online (N.d.). Discussions of exports of goods in this paper generally refer to domestic exports. These exports do not include re-exports, also called foreign exports, which the Census Bureau defines as "[e]xports of foreign merchandise (re-exports), consist[ing] of commodities of foreign origin which have entered the United States ... and which, at the time of exportation, are in substantially the same condition as when imported." US Census Bureau (2005). When figures in this paper include re-exports, it is noted. Goods exports by state are adjusted to remove re-exports by using the proportion of domestic goods exports to total exports for national data.

over $189 billion in goods exports and nearly $240 billion in services exports (**Table 1**).[2] (See **Appendix Table A1** for monthly export data.)

Table 1

Estimates of Value of US Exports Lost Due to the Pandemic and World Recession, January 2020–May 2021 (millions USD)

Period	Value of US Exports			Difference from 2019 Baseline		
	Total	*Goods*	*Services*	Total	*Goods*	*Services*
Pre-Pandemic						
2019 annual data	$2,268,696	$1,392,401	$876,295	n.a.	n.a.	n.a.
Pandemic						
2020 annual data	$1,906,458	$1,200,815	$705,643	$362,238	$191,586	$170,652
January to May 2021	$878,347	$582,371	$295,976	$66,943	-$2,204	$69,147
Estimated Value of Lost US Exports Due to the Pandemic and World Recession in Total (millions USD)				$429,181	$189,382	$239,799

Sources: US Census Bureau Foreign Trade Division (2021), USA Trade Online (N.d.), and author's calculations.

It is also possible to estimate the loss of jobs associated with this decline in exports. Based on the latest available report from the Department of Commerce's International Trade Administration, $1 billion of exports of goods, on average, supports 4,670 jobs, and $1 billion of exports of services supports 5,539 jobs. This means that a total of over 10.7 million jobs are supported by the US export industry: about 3.5 million from goods exports, and about 7.3 million from services exports.[3]

The Department of Commerce's analysis implies that the loss of exports from the pandemic and world recession resulted in a loss of over 1.8 million jobs in 2020. Including 2021 data, this number reaches over 2.2 million jobs; about 884,000 from the loss of goods exports and about 1.3 million from the loss of services exports (**Table 2**).[4]

2 Absent the pandemic, it is likely that exports in 2020 would have surpassed those in 2019. This would imply that lost exports due to the effects of the pandemic, and thus lost jobs, would be greater than these estimates. For example, in 2019, the IMF projected an increase in the volume of exports of goods and services of nearly 3 percent in 2020 (IMF 2019).

3 See International Trade Administration (2020) and Rasmussen (2020). This represents the direct and indirect "employment required throughout the economy in order to produce US exports of a given commodity."

4 See Rasmussen (2020) for the Department of Commerce's methodology. This analysis assumes that the composition of export declines is representative of the pre-decline composition, and that jobs that rely on export earnings were lost because the corresponding exports were lost.

Table 2

Implied Loss of Jobs Due to a Decline in US Exports During the Pandemic and World Recession, January 2020–May 2021

	Total	*Goods*	*Services*
Estimated Value of Lost US Exports in 2020 (billions USD)	$362.238	$191.586	$170.652
Estimated Value of Lost US Exports in Total (billions USD)	$429.181	$189.382	$239.799
Number of Jobs Supported by $1 Billion in Exports at the National Level	n.a.	4,670	5,539
Implied Loss of Jobs in 2020	1,839,948	894,707	945,241
Implied Loss of Jobs in Total	2,212,659	884,413	1,328,246

Sources and notes: International Trade Administration (2019), USA Trade Online (N.d.), US Census Bureau Foreign Trade Division (2021), and author's calculations. See notes in text.

The Impact of the Global Pandemic on US Exports and Export-Related Jobs, By State

It is possible to get a sense of the importance of exports to employment in specific US states (as well as Puerto Rico and the US Virgin Islands) from data on goods exports.[5] **Figure 1** shows that, as a share of total pre-pandemic employment, exports of goods in 2019 were most important to Alaska (export-related jobs represent 11.5 percent of the state's employment); Puerto Rico (9.5 percent); North Dakota (8.9 percent); Louisiana (8.8 percent); and Texas (8.7 percent).

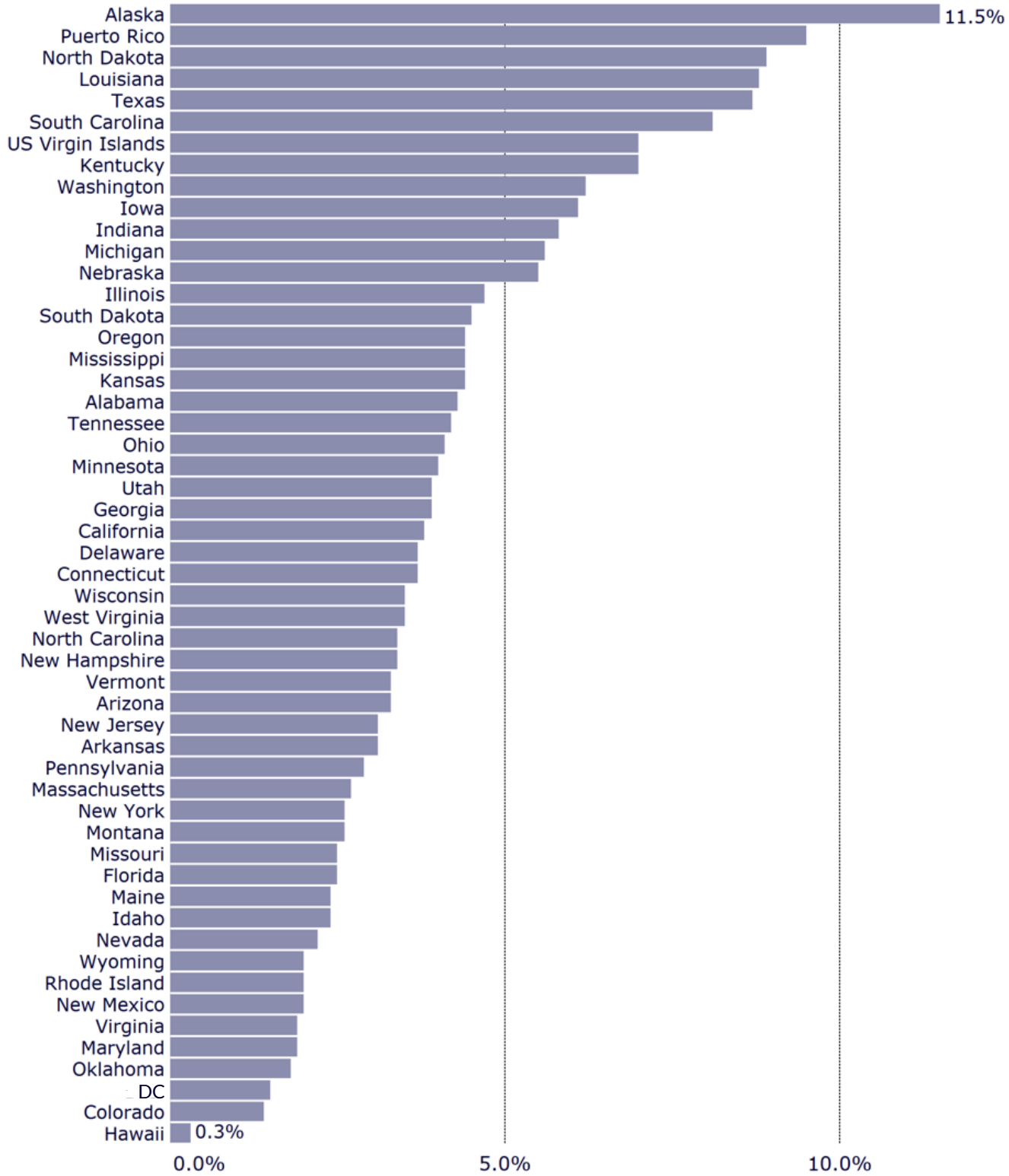
In the overall number of jobs supported by exports, Texas had the most at 1.1 million, followed by California (677,000), Illinois (290,000), New York (260,000), and Michigan (249,000). The states with the highest value of goods exported in 2019 were Texas with $288 billion, followed by California, New York, Louisiana, and Washington State. (See **Appendix Table A2**.)

From January 2020 to May 2021 — during the pandemic — all but 11 state-level jurisdictions saw declines in exports of goods (see **Box 1** for a discussion related to these 11 jurisdictions). Texas lost a total of nearly $43 billion in exports in goods, followed by Washington State ($22 billion), California ($17 billion), South Carolina ($14 billion), and Michigan ($12 billion). (See **Appendix Table A3** for more information.)

5 Data on services exports by state-level jurisdiction are not available from the Department of Commerce. As indicated by Rasmussen (2020), state-level numbers are "best thought of as representing the number of jobs supported by the exports from a state."

Figure 1

Percent of Total Employment Supported by Goods Exports, by State-Level Jurisdiction, 2019



Sources and notes: International Trade Administration (2021), US Bureau of Labor Statistics (2021), and author's calculations. State export data is limited to goods only and categorized by origin of movement. Goods exports are estimates of domestic exports; see footnote 1. Puerto Rico and the US Virgin Islands include some national-level data. See Appendix Table A2.

Box 1

From January 2020 to May 2021 — mostly during the pandemic — all but 11 state-level jurisdictions saw declines in exports of goods. It is important to note that in some of these 11 jurisdictions, it may be possible that a boom in exports of certain commodities is largely responsible for the gains, while exports of other commodities are still depressed. For example, New Jersey saw an increase in the value of its goods exports in 2020 driven in part by triple-digit growth in the value of exports of certain metals, but there were significant declines in other top exports (see table below). It is possible that a rebound in exports of these currently depressed commodities could lead to a recovery of jobs in industries that produce those commodities in New Jersey.

New Jersey's Top Goods Exports (Selected), Ranked by 2020 Value, 2019 and 2020 (millions USD)

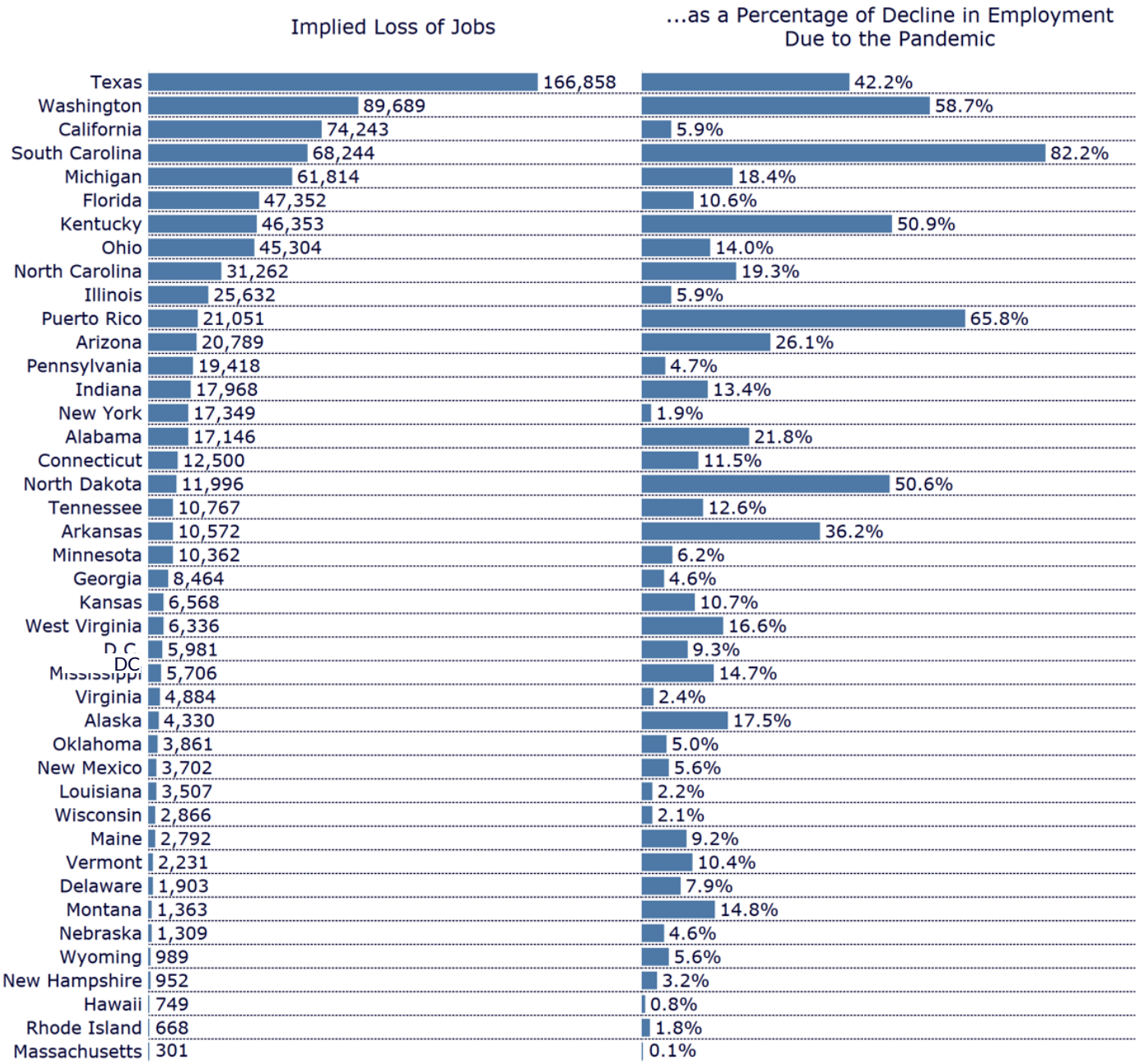
		2019		2020		
Rank	Commodity	Value	Share of Total	Value	Share of Total	Percent Change, 2019–2020
1	Palladium, Unwrought...	$1,333.7	3.7%	$2,716.3	7.1%	103.66%
2	Rhodium, Unwrought...	$636.6	1.8%	$2,495.6	6.6%	292.01%
9	Passenger Motor Vehicles...	$985.6	2.8%	$721.2	1.9%	-26.82%
10	Petroleum Oils, Oils...	$986.5	2.8%	$650.6	1.7%	-34.06%
12	Automatic Data Processing...	$684.3	1.9%	$515.4	1.4%	-24.69%
13	Chemical Products and...	$167.4	0.5%	$420.4	1.1%	151.09%
14	Civilian Aircraft, Engines...	$724.4	2.0%	$416.9	1.1%	-42.46%
20	Platinum, Unwrought...	$123.6	0.3%	$350.2	0.9%	183.28%
21	Medicaments, in Measured...	$542.6	1.5%	$336.1	0.9%	-38.07%
25	Parts of Machines and...	$86.7	0.2%	$291.1	0.8%	235.84%

Source and notes: Adapted from US Census Bureau (2021). State export data is limited to goods only and categorized by origin of movement and six-digit Harmonized System Codes. Commodities with the top five largest percent increases and decreases are shown. Figures include re-exports.

Figure 2 shows the implied losses of jobs, due to declines in exports of goods, by state-level jurisdiction. In terms of total export-related job loss, Texas was hardest hit, with 167,000 jobs lost, followed by Washington State (90,000 jobs), California (74,000 jobs), South Carolina (68,000 jobs), and Michigan (62,000 jobs). As a share of January 2020 total state employment levels (as shown in Appendix Table A3), South Carolina had the largest drop (3.1 percent), followed by Puerto Rico (2.7 percent), North Dakota (2.7 percent), Washington State (2.6 percent), and Kentucky (2.4 percent).

Figure 2

Implied Loss of Jobs Due to Decline in Goods Exports During the Pandemic and World Recession, by State-Level Jurisdiction, January 2020–May 2021



Sources and notes: International Trade Administration (2021), USA Trade Online (N.d.), US Bureau of Labor Statistics (2021), and author's calculations. State export data is limited to goods only and categorized by origin of movement. Goods exports are estimates of domestic exports; see footnote 1. Puerto Rico and the US Virgin Islands include some national-level data. Total employment is total nonfarm employment and the decline in employment due to the pandemic is from January 2020 to May 2021. See Appendix Table A3.

The implied loss of jobs based on the cumulative loss of exports in goods throughout the pandemic can also be compared to the remaining gap in employment due to the pandemic. For example, employment in South Carolina in May 2021 is still down by 83,000 jobs

compared to January 2020 levels. As shown in Figure 2, implied loss of jobs due to lost exports of goods represents over 82 percent of this total number of lost jobs, suggesting that a rebound in just exports of goods in South Carolina would close most of the remaining gap in employment due to the pandemic. This is a similar story for Puerto Rico (66 percent), Washington State (59 percent), Kentucky (51 percent), and North Dakota (51 percent).[6]

A Stronger Rebound in US Exports Now Can Lead to More Jobs in the Future

Many of the jobs lost due to a decline in US Exports will eventually return as the global economy recovers. However, if jobs return at a faster pace, it will have greater benefits for the United States.

It is thus instructive to look at the potential future job gains from a faster recovery and the subsequent growth in exports using a simple analysis. **Figure 3** shows projections, from the IMF, for the growth in the volume of US Exports in goods and services in October 2019 (pre-pandemic) and in April 2021, as well as an Alternate Scenario where exports fully recover to 2019 levels in 2021 and grow at the same rates as in the April 2021 projection in subsequent years.[7] As can be seen, the IMF's April 2021 projections remain below the pre-pandemic trend until 2024, the last year with available data. In the Alternate Scenario, exports surpass the pre-pandemic trend in 2023, meaning that all the losses from the pandemic have been recovered at that point.

If it is assumed that these projections in the volume of exports roughly translate to projections in the value of exports in both goods and services, **Table 3** shows the value of exports by year under the different projections as well as implied jobs gains from the Alternate Scenario. This demonstrates how valuable a more robust initial recovery of exports in 2021 would be, as it puts the United States on a path to hundreds of thousands more jobs than projected, with about 550,000 more jobs gained in total by 2026.[8]

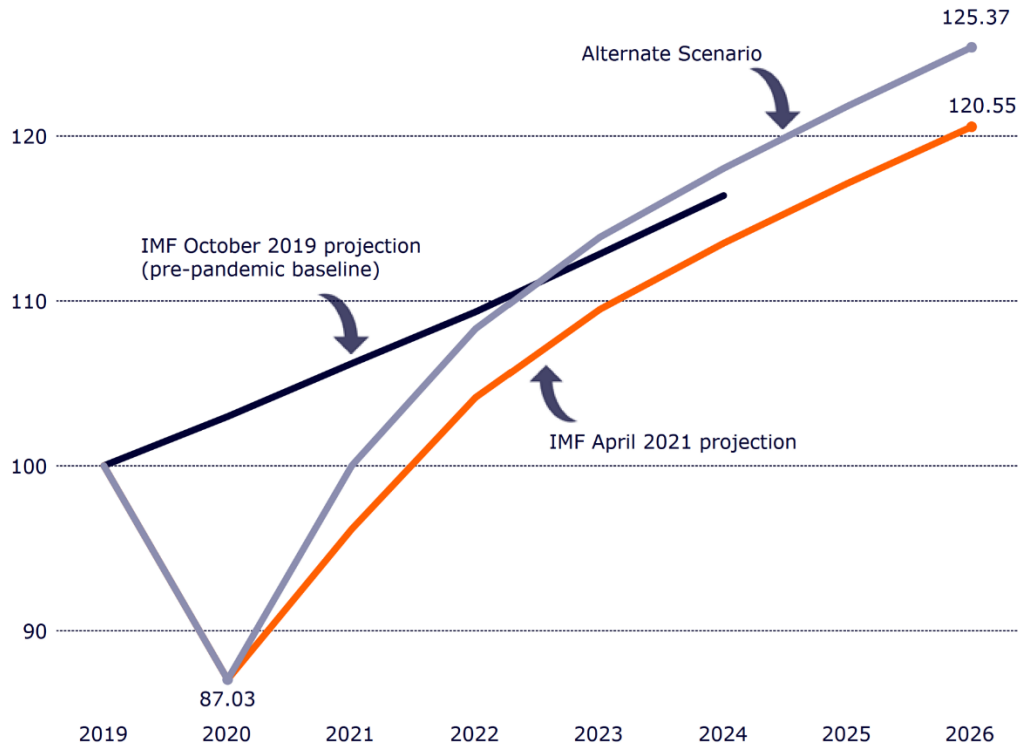
6 It is important to note again that this state analysis is limited to goods exports and that the inclusion of services exports would likely make these numbers more compelling, especially because services exports have not recovered as much as goods exports to date (see Table 1).

7 Although optimistic for the United States, some countries are projected to recover to 2019 levels in 2021. See UNCTAD (2021).

8 This assumes that, for 2020 and beyond, the jobs supported by $1 billion in exports in both goods and services is the same as in 2019.

Figure 3

Index of Projections of the Volume of US Exports in Goods and Services, 2019–2026



Sources and notes: IMF (2019), IMF (2021) and author's calculations. 2019 = 100. Estimates for the October 2019 projection start after 2018. Estimates for the April 2021 and Alternate Scenario projections start after 2020. See text.

Table 3

Projections of Value of US Exports in Goods and Services, and Implied Job Gains, 2019–2026 (millions USD)

Year	Value of Exports, October 2019 Projection	Value of Exports, April 2021 Projection	Value of Exports, Alternate Scenario	Difference in Values of Exports between Alternate Scenario and April 2021 Projection	Implied Job Gains from Alternate Scenario
2019	$2,268,696	$2,268,696	$2,268,696	$0	0
2020	$2,336,349	$1,906,458	$1,906,458	$0	0
2021	$2,409,313	$2,181,487	$2,268,696	$87,209	436,540
2022	$2,480,315	$2,362,615	$2,457,066	$94,450	472,786
2023	$2,560,008	$2,483,794	$2,583,089	$99,295	497,036
2024	$2,640,366	$2,574,850	$2,677,785	$102,935	515,257
2025	n.a	$2,657,348	$2,763,581	$106,233	531,766
2026	n.a	$2,734,996	$2,844,333	$109,337	547,304

Sources and notes: IMF (2019), IMF (2021), International Trade Administration (2020), and author's calculations. Estimates for the October 2019 projection start after 2018. Estimates for the April 2021 and Alternate Scenario projections start after 2020. It is assumed that projections for the volume of exports roughly translate to the value of exports in both goods and services. Implied job gains use the 2019 national estimates for jobs supported by $1 billion in exports, separately for goods and services. See text.

How Special Drawing Rights Can Help Bring US Jobs Back

The losses of jobs discussed here are not due to the pandemic or recession within the United States, but due to the loss of demand for exports from the rest of the world. As discussed earlier, many of these jobs will come back as the world economy recovers, and the faster it recovers, the more jobs will be created in the United States, and the sooner they will be created.

An issuance of Special Drawing Rights (SDRs) by the International Monetary Fund (IMF) would provide a significant boost to the recovery of the world economy, especially by providing support to low- to middle-income countries. SDRs are a reserve asset issued by the IMF to its member countries. These reserve assets can be exchanged, usually by low- and middle-income countries, for hard currency, like the euro or dollar, if need can be shown. SDRs are a unique tool because they can be issued relatively quickly, they do not cost any country anything, and they are not loans. They also do not have any conditions, for example relating to the recipient country's macroeconomic policies, attached to them.[9]

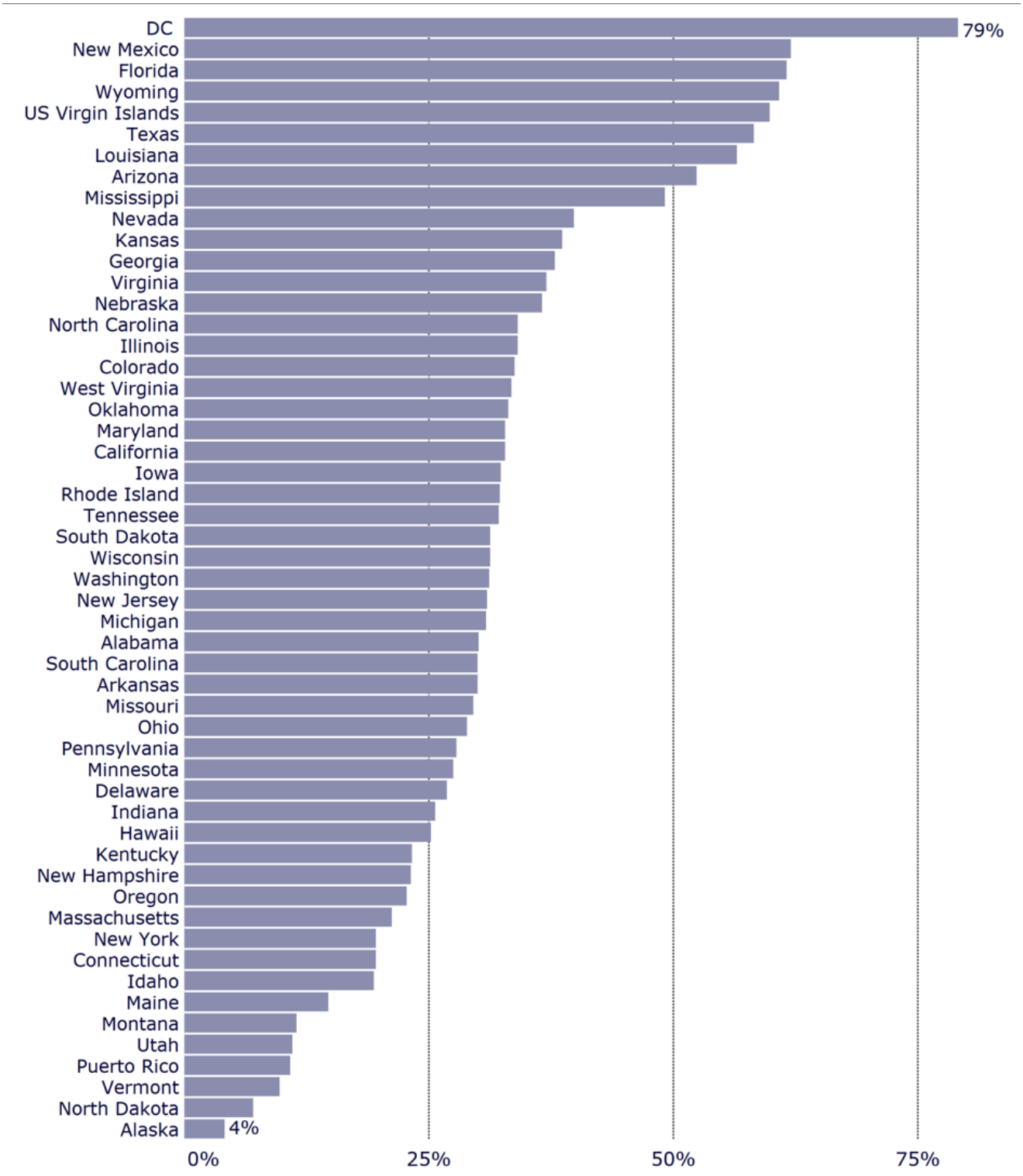
More specifically, SDRs would boost the world economy by helping prevent and mitigate economic crises, including balance of payments crises, fiscal crises, and debt crises. They play this role even when they are not converted to hard currency because they provide developing countries with supplemental international reserves; this also lowers countries' borrowing costs.[10] It would also help countries access resources to help them tackle the pandemic sooner, and thereby allow them to achieve a faster and more complete recovery, as well as save many lives. In turn, this allows countries to bolster domestic demand and purchase a greater quantity of imports from the United States more quickly than they would without the additional SDRs.

Figure 4 shows that low- and middle-income economies import a significant amount of goods from most US states, illustrating the importance of an economic recovery in low- and middle-income economies to the health of specific US states' economies. In 2019, the value of goods exports to low- and middle-income economies, excluding China, represented 79 percent of the District of Columbia's total, 62 percent of New Mexico's, 62 percent of Florida's, 61 percent of Wyoming's, and 60 percent of the US Virgin Islands's.

9 Center for Economic and Policy Research (June 2021).
10 Jacobs, Main, and Weisbrot (2020).

Figure 4

Share of Value of Goods Exports to Low- and Middle-Income Economies, Excluding China, by State-Level Jurisdiction, 2019



Sources and notes: USA Trade Online (N.d.) and author's calculations. State export data is limited to goods only and categorized by origin of movement. Figures include re-exports. Low- and middle-income countries are those categorized as "Emerging Market and Developing Economies" by IMF (April 2021) and includes applicable nonmembers of the IMF. See Appendix Table A4.

In absolute terms, Texas exported $190 billion worth of goods to these economies in 2019, followed by California ($57 billion), Louisiana ($36 billion), Florida ($34 billion), and Illinois ($20 billion). (See **Appendix Table A4** for more information.)

Although the US Treasury Department has recently agreed to support an IMF issuance of $650 billion worth of SDRs — a positive and commendable move — this amount is significantly less than legislation supporting a 2 trillion SDR issuance, which was passed twice by the House of Representatives in 2020, and was introduced in the House and Senate in 2021.[11] S&P Global Ratings estimates also indicate that an issuance of $650 billion worth of SDRs will fall short of poor countries' reserve needs.[12]

For these reasons, an additional issuance of SDRs should be a priority for the IMF as well as for the Biden administration and other IMF member governments if they want to ensure a robust recovery of the global economy.

11 Center for Economic and Policy Research (April 2021).
12 Arnold (2021).

Appendix

Appendix Table 1

Estimates of Value of US Exports Lost Due to the Pandemic and World Recession, January 2020–May 2021 (millions USD)

Period	Value of US Exports			Difference from 2019 monthly average		
	Total	*Goods*	*Services*	Total	*Goods*	*Services*
Pre-Pandemic						
2019 annual data	$2,268,696	$1,392,401	$876,295	n.a.	n.a.	n.a.
2019 monthly average	$189,058	$116,033	$73,025	n.a.	n.a.	n.a.
Pandemic						
January 2020	$178,552	$109,028	$69,524	-$10,506	-$7,005	-$3,501
February 2020	$180,232	$111,114	$69,118	-$8,826	-$4,920	-$3,907
March 2020	$174,131	$113,516	$60,615	-$14,927	-$2,517	-$12,410
April 2020	$135,365	$80,316	$55,049	-$53,693	-$35,718	-$17,976
May 2020	$132,667	$77,611	$55,056	-$56,391	-$38,422	-$17,969
June 2020	$142,440	$87,337	$55,103	-$46,618	-$28,696	-$17,922
July 2020	$148,736	$93,708	$55,028	-$40,322	-$22,325	-$17,997
August 2020	$154,297	$98,991	$55,306	-$34,761	-$17,043	-$17,719
September 2020	$157,241	$101,142	$56,099	-$31,817	-$14,891	-$16,926
October 2020	$167,544	$110,573	$56,971	-$21,514	-$5,461	-$16,054
November 2020	$164,728	$106,331	$58,397	-$24,330	-$9,703	-$14,628
December 2020	$170,526	$111,149	$59,377	-$18,532	-$4,885	-$13,648
2020 annual data	$1,906,458	$1,200,815	$705,643	n.a.	n.a.	n.a.
2020 monthly average	$158,871	$100,068	$58,804	-$30,187	-$15,966	-$14,221
Estimated Value of Lost US Exports Due to the Pandemic and World Recession in 2020				$362,238	$191,586	$170,652
January 2021	$165,693	$106,958	$58,735	-$23,365	-$9,075	-$14,290
February 2021	$163,395	$105,270	$58,125	-$25,663	-$10,764	-$14,900
March 2021	$185,149	$126,138	$59,011	-$3,909	$10,105	-$14,014
April 2021	$181,307	$121,692	$59,615	-$7,751	$5,659	-$13,410
May 2021	$182,803	$122,313	$60,490	-$6,255	$6,280	-$12,535
Estimated Value of Lost US Exports Due to the Pandemic and World Recession in Total				$429,181	$189,382	$239,799

Sources: US Census Bureau Foreign Trade Division (2021), USA Trade Online (N.d.), and author's calculations.

Appendix Table A2

Importance of Goods Exports to State-Level Jurisdictions, 2019 (USD)

Jurisdiction	Estimate of Total Value of Goods Exports	Jobs Supported by Goods Exports	Percent of Total Employment Supported by Goods Exports	Jobs Supported by $1 Billion in Exports
National	*$1,392,400,817,144*	*6,344,483*	*4.2%*	*4,670*
Alabama	$18,205,064,827	90,069	4.3%	4,947
Alaska	$4,367,194,776	37,903	11.5%	8,679
Arizona	$21,520,285,573	99,038	3.3%	4,602
Arkansas	$5,454,667,360	40,116	3.1%	7,354
California	$152,085,469,313	677,238	3.8%	4,453
Colorado	$7,088,744,443	39,989	1.4%	5,641
Connecticut	$14,219,743,341	62,610	3.7%	4,403
Delaware	$3,856,713,655	17,119	3.7%	4,439
DC	$3,229,351,999	12,239	1.5%	3,790
Florida	$49,003,015,637	223,233	2.5%	4,555
Georgia	$36,119,671,694	181,563	3.9%	5,027
Hawaii	$397,266,049	1,720	0.3%	4,330
Idaho	$3,005,759,108	18,498	2.4%	6,154
Illinois	$52,320,961,620	290,129	4.7%	5,545
Indiana	$34,444,782,701	185,135	5.8%	5,375
Iowa	$11,577,513,924	97,537	6.1%	8,425
Kansas	$10,210,197,324	63,325	4.4%	6,202
Kentucky	$28,895,322,376	136,160	7.0%	4,712
Louisiana	$55,918,550,064	174,494	8.8%	3,121
Maine	$2,384,676,422	15,221	2.4%	6,383
Maryland	$11,425,105,134	52,216	1.9%	4,570
Massachusetts	$22,876,735,096	100,909	2.7%	4,411
Michigan	$48,970,621,455	249,430	5.6%	5,093
Minnesota	$19,421,867,100	119,048	4.0%	6,130
Mississippi	$10,358,491,818	51,290	4.4%	4,951
Missouri	$11,774,365,324	73,855	2.5%	6,273
Montana	$1,485,790,403	12,502	2.6%	8,414
Nebraska	$6,531,345,323	57,094	5.5%	8,742
Nevada	$7,921,500,144	31,700	2.2%	4,002
New Hampshire	$5,101,460,621	23,048	3.4%	4,518
New Jersey	$31,251,611,096	131,611	3.1%	4,211
New Mexico	$4,096,082,950	17,221	2.0%	4,204
New York	$66,184,128,111	260,024	2.6%	3,929
North Carolina	$30,059,090,197	158,845	3.4%	5,284
North Dakota	$6,103,139,329	39,009	8.9%	6,392
Ohio	$46,593,652,291	231,604	4.1%	4,971
Oklahoma	$5,376,942,963	29,838	1.8%	5,549
Oregon	$20,658,266,869	86,677	4.4%	4,196
Pennsylvania	$37,415,988,452	176,488	2.9%	4,717
Puerto Rico	$17,848,102,265	83,351	9.5%	4,670
Rhode Island	$2,341,968,461	9,877	2.0%	4,217
South Carolina	$36,296,251,403	177,678	8.1%	4,895
South Dakota	$1,187,190,929	19,874	4.5%	16,740
Tennessee	$27,214,416,816	130,897	4.2%	4,810
Texas	$287,535,311,353	1,127,564	8.7%	3,921
US Virgin Islands	$597,646,096	2,791	7.0%	4,670
Utah	$15,179,711,680	61,280	3.9%	4,037
Vermont	$2,487,634,112	10,445	3.3%	4,199
Virginia	$15,604,834,392	78,792	1.9%	5,049
Washington	$52,824,056,959	217,365	6.2%	4,115
West Virginia	$5,207,686,862	25,222	3.5%	4,843
Wisconsin	$18,968,020,008	105,325	3.5%	5,553
Wyoming	$1,196,848,926	5,712	2.0%	4,773

Sources and notes: International Trade Administration (2021), USA Trade Online (N.d.), US Bureau of Labor Statistics (2021), and author's calculations. State export data is limited to goods only and categorized by origin of movement. Goods exports are estimates of domestic exports; see footnote 1. Puerto Rico and the US Virgin Islands use national-level data for jobs supported by exports. Total employment is total nonfarm employment. As an example from the table, Alabama had over $18 billion in goods exports in 2019. This supported just over 90,000 jobs. Those jobs represented 4.3 percent of total nonfarm employment in January 2020 (farm employment data is limited), giving a sense of how important export-supported jobs are to the state. (At the state level, $1 billion in goods exports from Alabama supported 4,947 jobs.)

Appendix Table A3

Implied Loss of Jobs Due to a Decline in Goods Exports During the Pandemic and World Recession, by State-Level Jurisdiction, January 2020–May 2021 (USD)

Jurisdiction	Estimate of Value of Lost Goods Exports	Implied Loss of Jobs Due to a Decline in Goods Exports	...as a Percentage of Pre-Pandemic Total Employment	...as a Percentage of the Decline in Total Employment
National	$189,381,770,995	*884,413*	*0.6%*	*12.1%*
Alabama	$3,465,677,690	17,146	0.8%	21.8%
Alaska	$498,846,417	4,330	1.3%	17.5%
Arizona	$4,517,398,269	20,789	0.7%	26.1%
Arkansas	$1,437,436,895	10,572	0.8%	36.2%
California	$16,672,455,458	74,243	0.4%	5.9%
Colorado	n.a.	n.a.	n.a.	n.a.
Connecticut	$2,838,964,712	12,500	0.7%	11.5%
Delaware	$428,834,694	1,903	0.4%	7.9%
DC	$1,578,255,591	5,981	0.7%	9.3%
Florida	$10,394,402,010	47,352	0.5%	10.6%
Georgia	$1,683,889,054	8,464	0.2%	4.6%
Hawaii	$172,996,041	749	0.1%	0.8%
Idaho	n.a.	n.a.	n.a.	n.a.
Illinois	$4,622,362,107	25,632	0.4%	5.9%
Indiana	$3,343,026,052	17,968	0.6%	13.4%
Iowa	n.a.	n.a.	n.a.	n.a.
Kansas	$1,058,936,582	6,568	0.5%	10.7%
Kentucky	$9,836,860,103	46,353	2.4%	50.9%
Louisiana	$1,124,008,868	3,507	0.2%	2.2%
Maine	$437,439,327	2,792	0.4%	9.2%
Maryland	n.a.	n.a.	n.a.	n.a.
Massachusetts	$68,187,421	301	0.0%	0.1%
Michigan	$12,136,017,337	61,814	1.4%	18.4%
Minnesota	$1,690,496,856	10,362	0.3%	6.2%
Mississippi	$1,152,289,312	5,706	0.5%	14.7%
Missouri	n.a.	n.a.	n.a.	n.a.
Montana	$162,034,069	1,363	0.3%	14.8%
Nebraska	$149,720,861	1,309	0.1%	4.6%
Nevada	n.a.	n.a.	n.a.	n.a.
New Hampshire	$210,804,064	952	0.1%	3.2%
New Jersey	n.a.	n.a.	n.a.	n.a.
New Mexico	$880,507,181	3,702	0.4%	5.6%
New York	$4,415,798,072	17,349	0.2%	1.9%
North Carolina	$5,915,883,544	31,262	0.7%	19.3%
North Dakota	$1,876,882,022	11,996	2.7%	50.6%
Ohio	$9,114,255,135	45,304	0.8%	14.0%
Oklahoma	$695,818,905	3,861	0.2%	5.0%
Oregon	n.a.	n.a.	n.a.	n.a.
Pennsylvania	$4,116,712,944	19,418	0.3%	4.7%
Puerto Rico	$4,507,646,594	21,051	2.4%	65.8%
Rhode Island	$158,316,758	668	0.1%	1.8%
South Carolina	$13,940,934,838	68,244	3.1%	82.2%
South Dakota	n.a.	n.a.	n.a.	n.a.
Tennessee	$2,238,606,133	10,767	0.3%	12.6%
Texas	$42,549,851,068	166,858	1.3%	42.2%
US Virgin Islands	n.a.	n.a.	n.a.	n.a.
Utah	n.a.	n.a.	n.a.	n.a.
Vermont	$531,358,152	2,231	0.7%	10.4%
Virginia	$967,363,903	4,884	0.1%	2.4%
Washington	$21,796,224,231	89,689	2.6%	58.7%
West Virginia	$1,308,302,405	6,336	0.9%	16.6%
Wisconsin	$516,072,340	2,866	0.1%	2.1%
Wyoming	$207,230,165	989	0.3%	5.6%

Sources and notes: See sources and notes from Table A1. Column will not sum to the national-level numbers due to rounding and other factors. As an example from the table, Alabama lost nearly $3.5 billion in exports using 2019 data as a baseline. This loss equates to just over 17,000 jobs, or about 0.8 percent of total employment. This implied loss of jobs represents almost 22 percent of the overall number of nonfarm jobs lost due to the pandemic and world recession (January 2020 to May 2021).

Appendix Table A4

Share of Value of Goods Exports to Low- and Middle-Income Economies, Excluding China, by State-Level Jurisdiction, 2019 (USD)

Jurisdiction	Total Value of Goods Exports	Value Goods Export to Low- and Middle-Income Economies, Excluding China	Percent of Total
National	*$1,642,820,351,680*	*$618,451,405,269*	*38%*
Alabama	$20,795,766,650	$6,255,471,041	30%
Alaska	$4,988,675,643	$204,645,961	4%
Arizona	$24,582,765,361	$12,884,189,225	52%
Arkansas	$6,230,902,809	$1,865,691,808	30%
California	$173,728,243,253	$56,957,012,006	33%
Colorado	$8,097,519,931	$2,735,454,386	34%
Connecticut	$16,243,307,407	$3,178,254,358	20%
Delaware	$4,405,549,663	$1,181,411,443	27%
DC	$3,688,910,270	$2,919,285,378	79%
Florida	$55,976,470,725	$34,452,417,046	62%
Georgia	$41,259,741,241	$15,638,414,755	38%
Hawaii	$453,799,650	$114,219,920	25%
Idaho	$3,433,498,623	$666,176,035	19%
Illinois	$59,766,582,492	$20,366,729,960	34%
Indiana	$39,346,504,403	$10,110,243,472	26%
Iowa	$13,225,071,168	$4,275,173,112	32%
Kansas	$11,663,176,320	$4,501,530,091	39%
Kentucky	$33,007,318,959	$7,666,561,438	23%
Louisiana	$63,876,131,703	$36,086,033,171	56%
Maine	$2,724,031,740	$402,203,713	15%
Maryland	$13,050,973,593	$4,283,018,245	33%
Massachusetts	$26,132,246,674	$5,553,666,010	21%
Michigan	$55,939,466,636	$17,249,959,066	31%
Minnesota	$22,185,727,981	$6,105,246,559	28%
Mississippi	$11,832,574,107	$5,816,438,687	49%
Missouri	$13,449,935,831	$3,967,212,334	29%
Montana	$1,697,228,261	$194,053,506	11%
Nebraska	$7,460,799,208	$2,726,857,929	37%
Nevada	$9,048,782,308	$3,604,007,197	40%
New Hampshire	$5,827,432,402	$1,347,337,090	23%
New Jersey	$35,698,923,237	$11,050,852,727	31%
New Mexico	$4,678,982,801	$2,901,482,368	62%
New York	$75,602,569,791	$14,820,361,657	20%
North Carolina	$34,336,698,682	$11,701,884,417	34%
North Dakota	$6,971,656,653	$491,981,682	7%
Ohio	$53,224,238,948	$15,348,636,436	29%
Oklahoma	$6,142,117,713	$2,035,285,751	33%
Oregon	$23,598,075,661	$5,366,518,309	23%
Pennsylvania	$42,740,532,496	$11,887,784,641	28%
Puerto Rico	$20,388,005,941	$2,211,701,903	11%
Rhode Island	$2,675,246,152	$861,250,410	32%
South Carolina	$41,461,449,417	$12,419,756,694	30%
South Dakota	$1,356,136,095	$424,700,695	31%
Tennessee	$31,087,209,356	$9,982,533,255	32%
Texas	$328,453,498,814	$191,173,328,442	58%
US Virgin Islands	$682,695,111	$408,814,546	60%
Utah	$17,339,885,626	$1,906,047,498	11%
Vermont	$2,841,640,994	$275,611,220	10%
Virginia	$17,825,506,128	$6,604,239,867	37%
Washington	$60,341,271,645	$18,814,486,687	31%
West Virginia	$5,948,775,343	$1,991,961,543	33%
Wisconsin	$21,667,295,429	$6,770,202,563	31%
Wyoming	$1,367,168,489	$830,964,175	61%

Sources and notes: USA Trade Online (N.d.) and author's calculations. State export data is limited to goods only and categorized by origin of movement. Figures include re-exports. State-level numbers will not sum to national-level numbers due to rounding and other factors. Low- and middle-income countries are those categorized as "Emerging Market and Developing Economies" by IMF (April 2021) and includes applicable nonmembers of the IMF.

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