



The Perryman Group

## The Economic Outlook for Texas and Its Major Metro Areas: Recovery from COVID-19

Begins as the Economy Reopens July 2020

May and June jobs reports were encouraging and reflect the fact that as businesses began to reopen, what was essentially a sound economy before the pandemic responded relatively quickly.

However, even with these gains, Texas is still almost 700,000 jobs below a year ago and about 900,000 below the level just before the outbreak began. In addition, the June estimates are based on surveys completed in the middle of the month before the recent surge in cases, hospitalizations, and deaths in Texas. Subsequent measures to control the pandemic (in particular, closing bars again and pulling back on restaurants) will impact the numbers going forward, and initial claims for unemployment have risen recently. Further restrictions may prove necessary.

### OUTLOOK FOR THE STATE OF TEXAS

Real gross product is expected to decline by -5.12% this year on a year-over-year basis, with 6.11% expansion in 2021. Employment is projected to decrease -5.42% through 2020, with recovery of 4.13% next year. Current estimates of Texas losses for this year are slightly lower than The Perryman Group's projections last quarter, but the rate of recovery next year is also likely to be slower than expected last quarter.

### OUTLOOK FOR MAJOR METROPOLITAN AREAS

The Perryman Group's latest projections for Texas MSAs indicate a drop in business activity and jobs on a year-over-year basis, but a return to growth for 2021.

## Texas Major Metropolitan Area Outlook through 2021

Wage & salary employment by metropolitan area

Region	Loss in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Austin-Round Rock-Georgetown MSA	-40,280	-3.62%	+44,032	+4.11%
Dallas-Plano-Irving MD	-90,694	-3.26%	+113,627	+4.22%
El Paso MSA	-20,411	-5.69%	+11,910	+3.52%
Fort Worth-Arlington-Grapevine MD	-50,644	-4.66%	+42,570	+4.11%
Houston-The Woodlands-Sugar Land MSA	-148,657	-4.57%	+135,350	+4.36%
McAllen-Edinburg-Mission MSA	-12,603	-4.41%	+9,732	+3.56%
San Antonio-New Braunfels MSA	-42,729	-3.75%	+42,563	+3.88%
<b>State of Texas</b>	<b>-720,188</b>	<b>-5.42%</b>	<b>+519,051</b>	<b>+4.13%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: "MSA" refers to Metropolitan Statistical Areas and "MD" refers to Metropolitan Divisions.

For the Austin-Round Rock-Georgetown MSA, job losses for 2020 are expected to be almost 40,300 (a 3.62 % decline), with the addition of over 44,000 positions in 2021 (up 4.11%).

The Dallas-Plano-Irving MD is projected to lose nearly 90,700 jobs this year (-3.26%), with a 2021 increase of over 113,600 (+4.22%).

In the El Paso MSA, 2020 losses are forecast to be around 20,400 (-5.69%), with a 2021 recovery of 11,910 jobs next year (+3.52%).

Fort Worth-Arlington-Grapevine MD employment is likely to fall by over 50,600 this year (-4.66%) but be up by almost 42,600 (+4.11%) for 2021.

In the Houston-The Woodlands-Sugar Land MSA, some 148,600 jobs are likely to be lost in 2020 (-4.57%), with over 135,300 regained in 2021 (4.36% growth).

The McAllen-Edinburg-Mission MSA is forecast to experience a reduction in employment of 12,600 (-4.41%) this year, recovering about 9,730 next year (+3.56%).

For the San Antonio-New Braunfels MSA, losses will likely total over 42,700 for 2020 (-3.75%), while gains in 2021 exceed 42,500 (+3.88%).

More detail, including projections by industry, is provided in the accompanying tables.

## CONCLUSION

It should take about two years to return to prior peak levels even with no major additional disruptions. Health and safety remain of paramount concern, and progress will depend on the ability to continue to resume activity without creating an additional spike in infections that will necessitate a new wave of restrictions.

## METHODS AND ASSUMPTIONS

These projections are based on The Perryman Group's forecasting system, the US Multi-Regional Econometric Model, which provides detailed industry-level projections for the various regions and metropolitan areas within the United States. It is formulated in an internally consistent manner and is designed to permit the integration of relevant global, national, state, and local factors into the projection process. The model is the result of more than four decades of continuing research in econometrics, economic theory, statistical methods, key policy issues, and behavioral patterns, as well as intensive, ongoing study of all aspects of the economy. It is extensively used by scores of federal and State governmental entities on an ongoing basis, as well

as hundreds of major corporations.

The firm's US Multi-Regional Impact Assessment System was also integrated in this dynamic analysis of COVID-19's effects on the outlook for the US and Texas. The Perryman Group developed a scenario for estimating the effects of COVID-19 which reflects a variety of public and private source materials including, among others, data from sectors that have been particularly affected, information from areas where the pandemic spread earlier (as well as prior pandemics and natural disasters), performance patterns in other economic downturns and recoveries, and historical responses to oil price fluctuations. Reasonable measures of potential direct effects by detailed industrial category were developed and

used as inputs to the impact assessment system. The anticipated effects of the virus going forward and recent and expected monetary and fiscal policy actions were incorporated into projections of economic indicators.

These systems have been developed, maintained, and expanded by The Perryman Group over the past four decades. They have been used in thousands of applications, including numerous crisis situations (including several natural disasters), major health care issues (such as cancer and diabetes), pressing social concerns (such as hunger, child maltreatment, homelessness, and indigent health care), and substantial disruptions in global energy markets.

# Austin-Round Rock-Georgetown MSA Outlook through 2021

## Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-130	-7.21%	+62	+3.72%
Mining, Quarrying, and Oil and Gas Extraction	-597	-13.77%	+536	+14.32%
Utilities	+31	+1.35%	+52	+2.18%
Construction	+1,800	+2.84%	+2,251	+3.45%
Manufacturing	+1,631	+2.64%	+1,478	+2.33%
Wholesale Trade	-1,366	-2.37%	+1,595	+2.84%
Retail Trade	-3,355	-3.08%	+2,563	+2.43%
Transportation and Warehousing	+301	+1.47%	+371	+1.79%
Information	-2,548	-7.47%	+927	+2.94%
Finance and Insurance	+2,090	+4.39%	+1,673	+3.37%
Real Estate and Rental and Leasing	+1,030	+4.82%	+766	+3.42%
Professional, Scientific, and Technical Services	+1,101	+0.94%	+2,609	+2.20%
Management of Companies and Enterprises	+24	+0.32%	+119	+1.58%
Administrative and Support and Waste Management and Remediation	+312	+0.43%	+1,226	+1.69%
Educational Services	-1,253	-6.74%	+655	+3.78%
Health Care and Social Assistance	-6,165	-5.85%	+5,834	+5.88%
Arts, Entertainment, and Recreation	-2,624	-17.36%	+860	+6.88%
Accommodation and Food Services	-21,111	-17.88%	+12,739	+13.14%
Other Services (Except Government and Government Enterprises)	-3,931	-6.86%	+3,321	+6.23%
Government and Government Enterprises	-5,521	-3.12%	+4,397	+2.56%
<b>Total, All Industries</b>	<b>-40,280</b>	<b>-3.62%</b>	<b>+44,032</b>	<b>+4.11%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

# Dallas-Plano-Irving MD Outlook through 2021

## Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-243	-7.58%	+98	+3.32%
Mining, Quarrying, and Oil and Gas Extraction	-1,428	-12.28%	+834	+8.18%
Utilities	-79	-1.17%	+178	+2.66%
Construction	+2,772	+1.87%	+5,885	+3.89%
Manufacturing	-1,714	-0.93%	+4,674	+2.56%
Wholesale Trade	+1,301	+0.82%	+4,271	+2.68%
Retail Trade	-5,076	-1.93%	+7,767	+3.01%
Transportation and Warehousing	-2,457	-2.10%	+7,136	+6.23%
Information	-392	-0.56%	+547	+0.78%
Finance and Insurance	+5,877	+3.03%	+5,774	+2.89%
Real Estate and Rental and Leasing	+1,700	+2.73%	+1,842	+2.88%
Professional, Scientific, and Technical Services	-3,074	-1.25%	+10,437	+4.30%
Management of Companies and Enterprises	-1,015	-1.97%	+1,786	+3.54%
Administrative and Support and Waste Management and Remediation	-3,874	-1.60%	+9,351	+3.93%
Educational Services	-1,784	-4.36%	+1,038	+2.66%
Health Care and Social Assistance	-14,406	-5.23%	+12,104	+4.63%
Arts, Entertainment, and Recreation	-6,871	-20.66%	+2,608	+9.88%
Accommodation and Food Services	-47,413	-19.12%	+25,403	+12.66%
Other Services (Except Government and Government Enterprises)	-3,779	-3.17%	+6,740	+5.84%
Government and Government Enterprises	-8,742	-2.84%	+5,155	+1.72%
<b>Total, All Industries</b>	<b>-90,694</b>	<b>-3.26%</b>	<b>+113,627</b>	<b>+4.22%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

## El Paso MSA Outlook through 2021

### Wage & salary by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-62	-7.26%	+29	+3.67%
Mining, Quarrying, and Oil and Gas Extraction	-8	-14.75%	+4	+9.23%
Utilities	-19	-1.23%	+28	+1.77%
Construction	-338	-1.89%	+397	+2.26%
Manufacturing	-2,010	-12.16%	+505	+3.48%
Wholesale Trade	-867	-6.83%	+358	+3.02%
Retail Trade	-1,268	-3.17%	+1,116	+2.88%
Transportation and Warehousing	-454	-2.94%	+418	+2.79%
Information	-282	-5.97%	+68	+1.53%
Finance and Insurance	-14	-0.16%	+152	+1.83%
Real Estate and Rental and Leasing	-30	-0.58%	+109	+2.08%
Professional, Scientific, and Technical Services	-1,299	-15.04%	+378	+5.15%
Management of Companies and Enterprises	-217	-14.62%	+72	+5.67%
Administrative and Support and Waste Management and Remediation	-3,929	-15.32%	+1,044	+4.81%
Educational Services	-54	-1.42%	+96	+2.56%
Health Care and Social Assistance	-567	-1.26%	+1,782	+4.02%
Arts, Entertainment, and Recreation	-414	-18.11%	+116	+6.22%
Accommodation and Food Services	-5,660	-16.17%	+2,812	+9.58%
Other Services (Except Government and Government Enterprises)	-2,047	-13.13%	+687	+5.07%
Government and Government Enterprises	-872	-0.89%	+1,741	+1.79%
<b>Total, All Industries</b>	<b>-20,411</b>	<b>-5.69%</b>	<b>+11,910</b>	<b>+3.52%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

## Fort Worth-Arlington-Grapevine MD Outlook through 2021

### Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-151	-7.01%	+79	+3.95%
Mining, Quarrying, and Oil and Gas Extraction	-2,292	-15.76%	+1,166	+9.52%
Utilities	-36	-1.56%	+57	+2.55%
Construction	-522	-0.83%	+1,844	+2.94%
Manufacturing	-7,099	-6.98%	+2,784	+2.94%
Wholesale Trade	-3,214	-5.69%	+1,614	+3.03%
Retail Trade	+1,037	+0.88%	+3,043	+2.55%
Transportation and Warehousing	-2,332	-2.69%	+5,331	+6.32%
Information	-883	-8.12%	+132	+1.32%
Finance and Insurance	+1,237	+2.52%	+1,393	+2.77%
Real Estate and Rental and Leasing	+366	+2.22%	+449	+2.66%
Professional, Scientific, and Technical Services	-767	-1.85%	+1,722	+4.23%
Management of Companies and Enterprises	-189	-2.19%	+326	+3.86%
Administrative and Support and Waste Management and Remediation	-1,647	-2.56%	+2,181	+3.47%
Educational Services	-881	-5.29%	+412	+2.61%
Health Care and Social Assistance	-8,363	-6.93%	+4,311	+3.84%
Arts, Entertainment, and Recreation	-3,067	-16.68%	+1,493	+9.74%
Accommodation and Food Services	-17,099	-16.53%	+9,398	+10.88%
Other Services (Except Government and Government Enterprises)	-3,668	-7.26%	+2,542	+5.42%
Government and Government Enterprises	-1,076	-0.77%	+2,291	+1.64%
<b>Total, All Industries</b>	<b>-50,644</b>	<b>-4.66%</b>	<b>+42,570</b>	<b>+4.11%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

# Houston-The Woodlands-Sugar Land MSA Outlook through 2021

## Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-327	-7.08%	+166	+3.88%
Mining, Quarrying, and Oil and Gas Extraction	-17,491	-20.22%	+8,774	+12.71%
Utilities	-79	-0.46%	+533	+3.13%
Construction	-12,515	-5.43%	+8,001	+3.67%
Manufacturing	-16,432	-6.78%	+7,431	+3.29%
Wholesale Trade	-8,847	-4.95%	+6,404	+3.77%
Retail Trade	-8,352	-2.72%	+8,431	+2.82%
Transportation and Warehousing	-478	-0.35%	+4,494	+3.28%
Information	-858	-2.77%	+467	+1.55%
Finance and Insurance	-1,602	-1.46%	+2,773	+2.56%
Real Estate and Rental and Leasing	-1,002	-1.63%	+1,576	+2.61%
Professional, Scientific, and Technical Services	-2,629	-1.09%	+9,813	+4.10%
Management of Companies and Enterprises	-629	-1.29%	+1,870	+3.89%
Administrative and Support and Waste Management and Remediation	-3,240	-1.38%	+8,782	+3.79%
Educational Services	-860	-1.42%	+1,719	+2.89%
Health Care and Social Assistance	-5,279	-1.55%	+13,428	+4.01%
Arts, Entertainment, and Recreation	-4,962	-13.33%	+3,476	+10.77%
Accommodation and Food Services	-41,114	-13.88%	+29,866	+11.71%
Other Services (Except Government and Government Enterprises)	-14,057	-8.34%	+9,182	+5.95%
Government and Government Enterprises	-7,904	-1.88%	+8,165	+1.98%
<b>Total, All Industries</b>	<b>-148,657</b>	<b>-4.57%</b>	<b>+135,350</b>	<b>+4.36%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

# McAllen-Edinburg-Mission MSA Outlook through 2021

## Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-414	-7.26%	+194	+3.67%
Mining, Quarrying, and Oil and Gas Extraction	-342	-21.33%	+124	+9.85%
Utilities	-26	-3.07%	+20	+2.44%
Construction	-760	-10.72%	+268	+4.24%
Manufacturing	-1,645	-23.35%	+258	+4.78%
Wholesale Trade	-223	-2.38%	+409	+4.46%
Retail Trade	-1,403	-3.77%	+992	+2.77%
Transportation and Warehousing	-305	-3.89%	+225	+2.99%
Information	-107	-4.22%	-7	-0.28%
Finance and Insurance	-565	-7.83%	+208	+3.13%
Real Estate and Rental and Leasing	-203	-9.07%	+67	+3.28%
Professional, Scientific, and Technical Services	-305	-5.67%	+183	+3.60%
Management of Companies and Enterprises	-42	-6.01%	+21	+3.22%
Administrative and Support and Waste Management and Remediation	-703	-6.05%	+348	+3.18%
Educational Services	-7	-0.33%	+40	+1.97%
Health Care and Social Assistance	+537	+0.73%	+2,100	+2.82%
Arts, Entertainment, and Recreation	-353	-17.32%	+134	+7.93%
Accommodation and Food Services	-4,459	-18.66%	+1,880	+9.67%
Other Services (Except Government and Government Enterprises)	-687	-4.53%	+604	+4.17%
Government and Government Enterprises	-591	-0.95%	+1,664	+2.70%
<b>Total, All Industries</b>	<b>-12,603</b>	<b>-4.41%</b>	<b>+9,732</b>	<b>+3.56%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

# San Antonio-New Braunfels MSA Outlook through 2021

## Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-206	-7.15%	+102	+3.80%
Mining, Quarrying, and Oil and Gas Extraction	-1,718	-16.32%	+1,024	+11.62%
Utilities	-7	-0.63%	+32	+2.88%
Construction	+1,180	+2.12%	+907	+1.59%
Manufacturing	-523	-1.05%	+1,864	+3.77%
Wholesale Trade	-629	-1.62%	+1,063	+2.77%
Retail Trade	-3,243	-2.80%	+3,629	+3.22%
Transportation and Warehousing	+1,936	+6.34%	+1,046	+3.22%
Information	-1,082	-5.12%	+306	+1.53%
Finance and Insurance	-1,864	-2.44%	+2,317	+3.11%
Real Estate and Rental and Leasing	-461	-2.48%	+584	+3.23%
Professional, Scientific, and Technical Services	-3,109	-5.44%	+2,335	+4.32%
Management of Companies and Enterprises	-805	-5.89%	+492	+3.83%
Administrative and Support and Waste Management and Remediation	-4,575	-5.90%	+2,781	+3.81%
Educational Services	-917	-4.52%	+515	+2.66%
Health Care and Social Assistance	-6,878	-4.70%	+5,080	+3.64%
Arts, Entertainment, and Recreation	-1,532	-8.73%	+869	+5.42%
Accommodation and Food Services	-11,597	-9.27%	+10,792	+9.51%
Other Services (Except Government and Government Enterprises)	-3,111	-5.84%	+2,417	+4.82%
Government and Government Enterprises	-3,589	-1.73%	+4,408	+2.17%
<b>Total, All Industries</b>	<b>-42,729</b>	<b>-3.75%</b>	<b>+42,563</b>	<b>+3.88%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.

# State of Texas Outlook through 2021

## Wage & salary employment by industry sector

Industry Sector	Loss/Gain in 2020		Recovery in 2021	
	Absolute	Percent	Absolute	Percent
Agriculture, Forestry, Fishing, and Hunting	-6,101	-7.22%	+2,909	+3.71%
Mining, Quarrying, and Oil and Gas Extraction	-47,522	-18.28%	+28,956	+13.63%
Utilities	-755	-1.45%	+787	+1.53%
Construction	-29,196	-3.67%	+23,020	+3.01%
Manufacturing	-33,324	-3.66%	+20,954	+2.39%
Wholesale Trade	-25,501	-4.18%	+22,290	+3.81%
Retail Trade	-85,550	-6.34%	+63,063	+4.99%
Transportation and Warehousing	-13,501	-2.55%	+14,238	+2.76%
Information	-14,265	-7.00%	+4,189	+2.21%
Finance and Insurance	-5,271	-0.90%	+8,028	+1.38%
Real Estate and Rental and Leasing	-1,108	-0.47%	+4,318	+1.85%
Professional, Scientific, and Technical Services	-18,034	-2.22%	+12,592	+1.58%
Management of Companies and Enterprises	-4,566	-3.12%	+3,133	+2.21%
Administrative and Support and Waste Management and Remediation	-19,527	-2.33%	+7,334	+0.90%
Educational Services	-8,238	-4.18%	+7,750	+4.10%
Health Care and Social Assistance	-73,176	-4.77%	+66,544	+4.56%
Arts, Entertainment, and Recreation	-22,899	-15.12%	+9,196	+7.15%
Accommodation and Food Services	-216,883	-17.23%	+155,684	+14.94%
Other Services (Except Government and Government Enterprises)	-39,769	-6.12%	+34,327	+5.62%
Government and Government Enterprises	-55,000	-2.63%	+29,738	+1.46%
<b>Total, All Industries</b>	<b>-720,188</b>	<b>-5.42%</b>	<b>+519,051</b>	<b>+4.13%</b>

Source: US Multi-Regional Econometric Model, The Perryman Group

Notes: Components may not sum due to rounding.



## THE PERRYMAN GROUP



The Perryman Group is a focused team of analysts who know how to address complex economic information tasks and present our findings effectively.

Our in-house professionals bring expertise in **economics, finance, statistics, mathematics, real estate, valuation, systems analysis, engineering, technical communications, and marketing**. Dr. Ray Perryman, President and CEO, has 40 years of experience in developing systems, analyzing complex problems, and communicating effectively. We have considerable pride in what we do. Our enthusiasm is both unbridled and contagious; every day brings a new opportunity for us to tackle a different problem or create a product or service specifically tailored to our clients.

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Dr. Perryman addresses dozens of audiences throughout the world every year, catering to a wide variety of events.

### M. RAY PERRYMAN, PH.D.

Dr. Perryman is the President and CEO of the Perryman Group and Distinguished Professor of Economic Theory and Method at the International Institute for Advanced Studies. Over the past 40 years, Dr. Perryman has helped recruit corporations providing tens of thousands of jobs through economic development work, resolved billion-dollar legal issues, and revamped public policy through impact assessments and other studies. His firm has measured economic impacts for corporate locations and expansions involving billions in investments, and his economic forecasts are used by corporations and government agencies alike.

He has provided economic analysis and expert testimony for civil litigation across a wide range of practice areas including antitrust

and competition, patent infringement and other intellectual property disputes, securities, and commercial and complex litigation. His work combines strong expertise in economic damages

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