



The Perryman Group

The Economic Cost of COVID-19 Fatalities in 2020

October 2020

The high human cost and loss of life due to COVID-19 is tragic and staggering. Few people have remained untouched by the disease in one way or another, with over 6.7 million US cases. As of October 27, the coronavirus had contributed to the death of more than 225,000 people in the United States. While the suffering and hardships imposed by these losses are incalculable and the primary concern, the economic consequences cannot be ignored.

A forthcoming study by Stephen J. Elledge, a virologist at Harvard Medical School, combines actuarial data on life expectancy and the distribution of COVID-19 associated deaths to estimate lost person-years of life. The study indicates that over 2,500,000 person-years of life had

been lost due to the pandemic in the US as of early October. The Perryman Group has taken this information, data compiled by the Centers for Disease Control and Prevention (CDC), and the firm's modeling systems to examine the resulting implications for business activity.

Although most of the fatalities have occurred among older age groups, The Perryman Group estimates that 2020 fatalities will cause a loss of more than 600,000 job-years (a person working for a year) over time (using the lower range of CDC estimates). This value is fully adjusted for age, gender, ethnicity, worklife probabilities, labor force participation, and stabilized unemployment rates.

Long-Term Impact of Lost Employment Associated with Estimated 2020 Deaths from COVID-19 on US Business Activity

Industry Sector	Total Expenditures	Gross Product	Personal Income	Job-Years*
Agriculture	-\$11.157 b	-\$3.192 b	-\$2.093 b	-30,830
Mining	-\$10.152 b	-\$2.485 b	-\$1.369 b	-8,278
Utilities	-\$26.994 b	-\$6.077 b	-\$2.652 b	-10,769
Construction	-\$15.193 b	-\$7.588 b	-\$6.253 b	-82,075
Manufacturing	-\$93.853 b	-\$29.296 b	-\$16.632 b	-227,692
Wholesale Trade	-\$19.776 b	-\$13.380 b	-\$7.715 b	-81,879
Retail Trade*	-\$55.352 b	-\$41.135 b	-\$23.847 b	-693,172
Transportation & Warehousing	-\$16.286 b	-\$10.939 b	-\$7.235 b	-92,136
Information	-\$11.791 b	-\$7.266 b	-\$3.102 b	-25,968
Financial Activities*	-\$87.585 b	-\$28.399 b	-\$10.344 b	-97,968
Business Services	-\$32.662 b	-\$20.717 b	-\$16.900 b	-192,137
Health Services	-\$19.386 b	-\$13.269 b	-\$11.219 b	-173,175
Other Services	-\$30.035 b	-\$15.595 b	-\$12.465 b	-276,063
Total, All Industries	-\$430.223 b	-\$199.339 b	-\$121.824 b	-1,992,143

Source: US Multi-Regional Impact Assessment System, The Perryman Group

Notes: Monetary values given in billions of 2020 US dollars. Components may not sum due to rounding. A job-year is equivalent to one person working for one year. Retail Trade includes Restaurants, Financial Activities includes Real Estate. Fully adjusted for age, gender, ethnicity, labor force participation rate, and stabilized unemployment rate.

As these direct losses flow through the economy in the coming years, the cumulative effects include declines of approximately **\$200 billion** in gross domestic product, **\$122 billion** in personal income, and **two million** job-years (including multiplier effects). This foregone activity is roughly equivalent to the annual amount generated in Louisiana or the Austin and Cleveland urban areas combined.

It should be noted that this measure does not begin to capture the full ramifications of the virus. The morbidity and lingering effects on those infected will reduce

productivity over an extended period, as will the problems with forgone or delayed medical care among the rest of the population and the mental health challenges that are posed by the ongoing crisis. In addition, there are the ongoing impacts on workers, households, and businesses the firm has been measuring and projecting on a continuing basis. The losses from fatalities are significant not only because of their magnitude, but also because they are both lingering and cannot be recouped.

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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, intellectual property disputes, securities, and commercial and complex litigation. His work combines strong expertise in economic damages calculation, asset valuation, market analysis, and statistical methods and econometrics.

@PerrymanGroup	www.perrymangroup.com
/PerrymanGroup	info@perrymangroup.com
/in/ray-perryman	1.800.749.8705

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