

<p><b>Project Title: Analysis of the Impacts of the COVID-19 Pandemic on Vessel and Cargo Movements in the United States</b></p>
<p><b>Project Abstract:</b> In March 2020, the World Health Organization declared the coronavirus disease 2019, abbreviated as COVID-19, to be a global pandemic [1]. The virus' impact on the United States initially began in January 2020 when the President declared the outbreak as a public health emergency, leading to a national emergency declaration on March 13, 2020 [2][3]. As the spread rate of COVID-19 increased and the initial lack of treatment option stressed the national healthcare system, different methods to slow virus transmission were proposed, primarily to give the healthcare system time to prepare units for the COVID-19 cases. The most common were social distancing, face masks, self-isolation, limits on the number of people in indoor environments, and work-from home. Ultimately, the most restrictive were near-total population lockdowns. The global nature of the pandemic and changes to market demands as a result of social distancing, isolation, and lockdowns, had a significant impact on both supply and demand. Not only were overseas manufactures impacted by labor and supply shortages, but domestic demand also experienced considerable changes. For example, fuel demand was drastically decreased while the demand for disinfectants increased. While this example highlights two commodities which experienced significant turmoil during the pandemic era lockdowns, many other goods faced, to varying degrees, similar changes. This research seeks to understand how these changes were manifest in national and international shipping trends. This research will investigate shifts in cargo movements, by commodity for both import and export operations for several ports across the US. This research will also examine changes origin/destination patterns. The National Automatic Identification System (NIAS) data for vessel movements from 2019 – 2021, will facilitate this investigation.</p>
<p><b>Describe Implementation of Research Outcomes:</b> The research is important because it will show the change in vessel traffic not only as aggregate fluctuations during the 2020 pandemic year, but by specific cargo type and across several ports within regions that had significantly different governmental policy approaches to limiting social interaction and mobility during the various phases of virus surge and recovery. The analytical results give insights into what shipping patterns were impacted; the extent to which it occurred; when, relative to the virus course, they occurred, and where these differences took place. Each of these on their own are completely novel findings in the body of research that currently relates COVID-19 and transportation. This study will likely represent the first empirical investigations into the movement of vessels and waterborne cargo during a pandemic.</p>
<p><b>Impacts/Benefits of Implementation:</b> <i>To be determined upon conclusion of the project:</i></p>
<p><b>Web Links:</b> martrec.uark.edu</p>
<p><b>Budget (Funding) Amounts &amp; Source(s) (US DOT +Match(s) =Total Costs):</b> MarTREC \$96,840 and cost share \$47,282</p>
<p><b>Project Start and End Dates:</b> 04/01/2022-09/30/23 complete</p>
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