

Forecasting the Economic Impacts of COVID-19 in Northeast Florida: Utilizing REMI PI+ Model

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Northeast Florida Regional Council (NEFRC)

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Results Summary:

- Overall, the model suggests that the economic effects of even a “best case scenario” will be severe.
- Northeast Florida will see effects about 15% more severe than the national average.
- The model suggests that a 2.7% decline in national gross domestic product (GDP) will result in the loss of more than 41,000 jobs locally, 4.2% of the workforce.
- Job losses will likely not be spread evenly across the regional economy but will be concentrated in certain industries. According to the model, Northeast Florida will see the highest percentage job losses in the following industries: Construction, Finance & Insurance, Real Estate, Health Care, Accommodation & Food Service, and Other Services.

NORTHEAST FLORIDA REGIONAL COUNCIL (NEFRC)

The Northeast Florida Regional Council (NEFRC) is a dynamic network of local governance, serving seven counties – Baker, Clay, Duval, Flagler, Putnam, Nassau and St. Johns – and 26 municipalities since 1977. The Council is engaged on numerous issues around the Region and works to serve the needs of member local governments. The Council serves to communicate, convene and collaborate with a variety of stakeholders across the seven counties in Northeast Florida. Council staff, through work programs, calculate and analyze data and information and ultimately help to construct solutions. For more information, please visit: www.nefrc.org/

COVID-19 PANDEMIC BACKGROUND ¹

In December of 2019, a new form of coronavirus, later named COVID-19, was identified in Wuhan, China with pneumonia like symptoms. Dozens of cases began to appear with health symptoms such as fever, dry cough, shortness of breath, respiratory failure, and pneumonia. In January of 2020, the first confirmed case of coronavirus had reached the mainland U.S. when an adult in Washington State had contracted the disease. By March of 2020, the coronavirus had rapidly spread across the globe and was officially declared a pandemic by the World Health Organization on March 11, 2020. This was the first declared global pandemic since the H1N1 swine flu in 2009.

In response to the pandemic, different policy orders were issued across the globe, with travel bans enacted, social distancing guidelines strongly enforced, and global markets entirely disrupted. In the U.S., President Trump issued travel restrictions to countries such as China and Iran, where massive outbreaks of coronavirus were taking place – and also issued travel warnings to countries like Italy where a spike in cases was starting to occur. On March 11, 2020, the same day when a global pandemic was declared, the NBA suspended all of its games for the remainder of the season when a player from the Utah Jazz tested positive for COVID-19, and President Trump issued a 30-day ban on travel to and from countries in Europe. These announcements would foreshadow more major disruptions that were about to hit the U.S. economy in the months to follow.



While thousands and thousands of cases started to appear all across the globe – with more than 3,000 deaths in Italy by March – the U.S. began to enact policies that would expand testing and restrict social interaction. In an effort to promote better social distancing, local and state governments, across the country, issued orders that required businesses to close off interior spaces, resulting in severe economic impacts for restaurants, retail stores, and other related industries. For businesses, nonprofits, and public agencies where functions could be completed remotely, standards quickly changed, and employees in all sectors were now being asked to work from home.

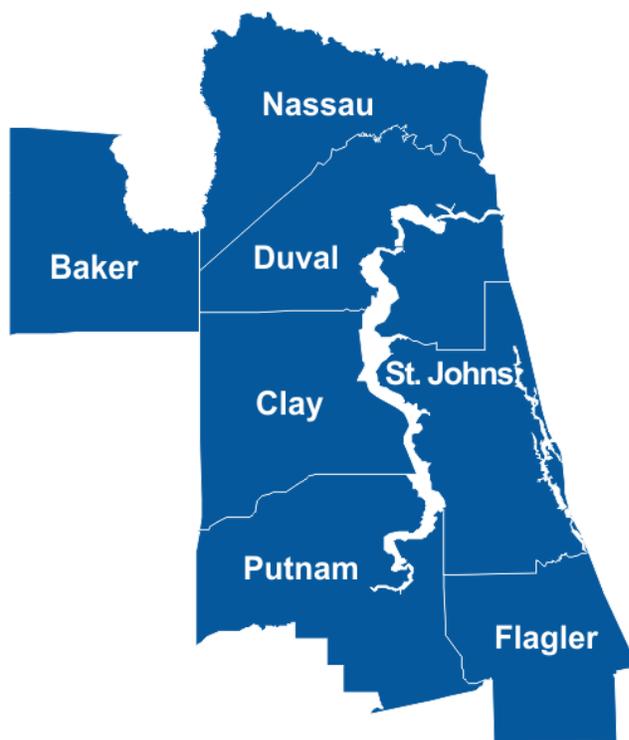
¹ Muccari, R., & Chow, D. (March 10, 2020). “Coronavirus timeline: Tracking the critical moments of COVID-19.” *NBC News*. Updated May 4, 2020.

IMPACT ON NORTHEAST FLORIDA & LOCAL GOVERNMENT RESPONSE ²

The first cases of novel coronavirus in Florida were announced in early March of 2020. During this time, local economies in Florida were at peak activity because of tourism rates influenced by Spring Break vacations across the United States. By March 12, 2020, Disney World and other Florida theme parks shutdown indefinitely because of the declaration of a global pandemic. These announcements were quickly followed by an executive order on March 17, 2020 issued by Governor DeSantis that demanded bars and nightclubs be shut down for 30 days, and for restaurants to reduce their customer entry. On April 1, 2020, Governor DeSantis issued an executive order telling residents of the State of Florida to stay at home.

In Northeast Florida, the first case of coronavirus was announced in Nassau County on March 10, 2020 with more cases appearing shortly after in Duval and St. Johns counties. Following the announcement of more cases, local elected officials began promoting social distancing guidelines, warning of a public health crisis if citizens did not follow.

In Jacksonville, the largest and most populated jurisdiction in the region, a state of emergency was declared in early March, causing immediate economic impacts across all of Duval County. Mayor Lenny Curry ordered all of Jacksonville's beaches to be closed until further noticed on March 20, and then issued a "Safer at Home" executive order requiring all non-essential businesses to close for safety of local citizens on April 1. During this time, drive-thru testing became available to the public, beaches in other counties such as St. Johns were now closed as well, school closures were extended, and thousands of local businesses were shutdown.



Recognizing the evolving nature of the pandemic, local governments began to respond to the situation by shifting priorities and short-term objectives and postponing non-essential activities. In Fernandina Beach, for instance, the City Commission and City administration took steps to halt public expenditures for all non-essential projects, opting instead to allocate \$210,000 to help purchase food for members of the local community who were experiencing economic hardship.³ In Jacksonville, members of City Council approved a small business relief package that totaled nearly \$28 million and would provide eligible small businesses with a \$1,000 grant to cover expenses.⁴ This relief in Duval County was extended further when Mayor Curry announced in

² Bloch, E. (April 28, 2020). "Timeline: How the coronavirus hit Jacksonville." *The Florida Times-Union*.

³ Roberts, J. (April 10, 2020). "City Commission holds 'virtual' meeting." *Fernandina Beach News Leader*.

⁴ Hong, C. (April 6, 2020). "Coronavirus: Jacksonville City Council approves relief package for small businesses." *The Florida Times-Union*.

April that a new stimulus package would be established to provide \$1,000 in financial assistance to 40,000 local residents who were in most need.⁵

FEDERAL STIMULUS PACKAGE & NATIONAL FINANCIAL RECOVERY

In responding to the national disaster at the Federal level, Congress passed the *Coronavirus Aid, Relief, and Economic Security (CARES) Act* with overwhelming bipartisan support and Presidential approval on March 27, 2020.⁶ The \$2 trillion economic relief package provided: (1) direct financial aid to individuals and households; (2) loans and grants to small businesses; (3) direct financial aid to specific industries that were especially hit hard; and (4) aid to state and local governments.⁷



According to FEMA’s webpage for economic support and recovery, “The response and recovery from COVID-19 will be the largest relief assistance program in American history by far and will take a whole-of-America partnership, every step of the way.” In addition to the CARES Act, other Federal agencies, such as the U.S. Small Business Administration, have stepped up response measures as well.

FORECAST METHODOLOGY

For the national projection, this study utilizes a forecast prepared by the University of Michigan that was released on April 9, 2020. REMI selected this forecast to translate into the 85 gross domestic product (GDP) components preferred for their model and released to users. Having a national forecast in the correct format is a requirement to develop a regional forecast.

The University of Michigan forecast represents a very detailed attempt to model potential effects of the pandemic and the shutdown as they were understood when it was being developed. In particular, it attempts to model the effects in different industries. Obviously, the situation continues to develop rapidly, and there are still huge uncertainties to account for. Overall, the University of Michigan predicts a “V-shaped” recession, with a very steep drop in GDP in the second quarter of 2020, following by steep recovery in the third and fourth quarters. They predict an overall drop in GDP in 2020 of 2.7%, with a corresponding drop of employment of 4.1%, representing around 8.2 million jobs lost. The model predicts higher job losses in certain industries, including construction, wholesale trade, IT, real estate, health care, arts, entertainment & recreation, accommodation & food service, and other services.

The model does include funding from the initial \$2.2 trillion CARES Act passed on March 25, 2020, though not the expansion of the Paycheck Protection Program that was passed on April 24, 2020. When describing their assumptions, the University of Michigan group stated, “Our forecast assumes that new COVID-19 cases will taper off quickly by late May or early June, with

⁵ Howard, J. “Duval County residents receive \$1,000 stimulus cards.” *First Coast News*.

⁶ U.S. Department of the Treasury. (2020). “The CARES Act Works for All Americans.”

⁷ Zexas, M. (April 8, 2020). “The CARES Act: Support for an Economic Rebound.” Morgan Stanley.

the economy beginning to reopen around that time. There is anticipated to be a massive expansion of testing capacity; enhanced federal powers allowing health officials to trace contacts of new COVID-19 patients and quarantine them effectively; an expansion in the supply of available facemasks and personal protective equipment; and changes in social norms and requirements, such as wearing facemasks in public places.” Obviously, it is difficult to assess whether these assumptions will be borne out, given the evolving nature of the pandemic.

Given the difficulty in developing forecasts in such an unpredictable and fast-moving situation, the focus of this analysis is on how changes in the national economy will be experienced in Northeast Florida. The region is heavily concentrated in some of the industries which are predicted to be hardest hit by the pandemic, such as construction, finance & insurance, and accommodation & food service. At the same time, the regional economy is strong in other sectors which will not be as affected, such as administrative & support jobs, and federal civilian, and military personnel. As the NEFRC develops a deeper understanding of how the regional economy differs from the national economy, staff researchers will be able apply lessons learned to any national-level prediction or outcome to determine what the effects will be for the region.

ECONOMIC IMPACT FORECAST DATA & ANALYSIS

The quantitative result summaries, generated by the local REMI PI+ model, are presented on pages 6 - 7 of this document. Table 1 presents a regional versus national comparison. Table 2 provides an overview of effects on specific industries. Tables 3 and 4 present changes to total employment and gross domestic product (GDP).

Overall, the model suggests that the economic effects of even a “best case scenario” will be severe. Due to the specific industry mix in the Northeast Florida economy, the associated economic downturn will be somewhat worse here than for the nation as a whole. Specifically, if the national economy experiences a 2.7% reduction in Gross Domestic Product, the REMI model projects that the region will see a decline in GDP of 3.1%, about 15% higher. A similar increased drop in disposable personal income per capita is projected, from 4.6% at the national level to 5.2% in this region.

A 2.7% decline in national GDP is projected to result in the loss of more than 41,000 jobs locally, 4.2% of the workforce. In addition, the local population and workforce will continue to grow, with the labor force increasing by over 4,000 people during 2020 (mainly due to teenagers graduating from high school and attempting to enter the work force). As a result, the region will have more than 45,000 people unable to find work. Immediately prior to the pandemic, the Jacksonville area had an unemployment rate of 3.0%, so the REMI model projects that the overall unemployment rate for 2020 to increase to around 7.7% (although the actual methods used to calculate the official unemployment are much more complicated than this, and the reported number may well be different).

Job losses will likely not be spread evenly across the regional economy but will be concentrated in certain industries. According to the model, Northeast Florida will see the highest percentage job losses in the following industries: Construction, Finance & Insurance, Real Estate, Health Care, Accommodation & Food Service, and Other Services. The challenges faced by several of

these industries have been well covered, such as the struggle to operate a hair salon or restaurant while maintaining the distance recommended to minimize transmission of the virus. Other industries, such as Finance or Health Care, are not so obvious, but there are already indications of trouble in these fields.

Regarding impacts to specific industries in Northeast Florida, there are a variety of reasons why certain industries are being hit to a larger extent than others. Despite an increased demand for emergency services, caused by the pandemic, many healthcare providers depend on elective procedures and routine office visits for large portions of overall revenue, and are thus now being faced with business model challenges. In the healthcare industry, the pandemic caused immediate economic impacts for many providers. [Mayo Clinic had announced on March 18](#) that it would defer elective surgeries, as well as office visits, for a minimum of 8 weeks – for all of its U.S. locations, including its Jacksonville campus. According to the Jacksonville Daily Record, in an [article published on April 24](#), “UF Health CEO Leon Haley said April 16 hospital admissions are down 14%, operating room visits are down 60% and clinic patient visits are down 65%.”

In the construction industry, many projects, especially ones related to transportation and infrastructure, [are weeks ahead of schedule](#) in Northeast Florida and others parts of the state. Despite this, however, there are other variables at play, both in the construction and real estate industries. The [NAIOP CRE Sentiment Index fell to 45](#) (on a 100 point scale) in March of 2020, falling below 50 for the first time since the index began in 2016. The NAIOP states, “The NAIOP CRE Sentiment Index was designed to estimate general conditions in the commercial real estate industry over the next 12 months by asking industry professionals to predict conditions for their own projects and markets.” The results of the survey suggest that there is a large amount of economic uncertainty caused by the coronavirus pandemic for professionals in these industries.

In the financial industry, one of the most significant stories to come out of the pandemic came when TIAA, which owns Jacksonville-based EverBank Financial Corp, announced that it would [offer voluntary separation packages to 75% of its total U.S. workforce](#). TIAA employs over a thousand workers in Northeast Florida. Companies like TIAA are being forced to reduce costs so that business operations can continue, but the long-term effects of decisions like this are still left to be determined.

Regarding retail, food, and accommodation service industries, the picture is much clearer because of the immediate impacts these industries were forced to endure. Retail businesses and restaurant establishments were required to close all interior spaces. Moving forward, these businesses will continue to face economic hardship because of limiting restrictions related to occupancy rates. Hotels and other lodging services, while considered essential by the State of Florida, are facing arduous economic challenges because of an overall decline in travel and tourism rates across the state.

Table 1*2019 - 2020 Economic Indicator Changes (Regional vs. National Comparison)*

Category	Result	Regional Change 2019 - 2020	National Change 2019 - 2020
Total Employment (Thousands)	-41,451	-4.2%	-4.1%
Gross Domestic Product (Billions)	-\$2.70	-3.1%	-2.7%
Population (Thousands)	30,193	1.7%	0.7%
Labor Force (Thousands)	4,408	0.5%	0.6%
Real Disposable Personal Income per Capita (Thousands)	-\$2,198	-5.2%	-4.6%

Table 2*2019 - 2020 Economic Indicator Changes (Regional vs. National Comparison)*

Industries	Change 2019 - 2020	% Change 2019 - 2020	% of Total 2019	% of National Total 2019
Total (Thousands)	-41,451	-4.2%	100.0%	100.0%
Construction	-3,198	-5.3%	6.0%	5.3%
Manufacturing	-1,222	-3.3%	3.8%	6.6%
Wholesale trade	-1,524	-5.1%	3.0%	3.3%
Retail trade	-3,304	-3.1%	10.9%	9.9%
Transportation and warehousing	-2,085	-4.2%	5.1%	3.9%
Finance and insurance	-4,762	-6.1%	7.8%	5.2%
Real estate and rental and leasing	-2,357	-5.4%	4.4%	4.6%
Professional, scientific, and technical services	-1,823	-2.7%	7.1%	7.2%
Administrative, support, waste management, and remediation services	-2,972	-3.8%	8.1%	6.2%
Educational services; private	-912	-5.5%	1.7%	2.4%
Health care and social assistance	-7,899	-6.8%	11.5%	11.4%
Arts, entertainment, and recreation	-1,247	-5.6%	2.2%	2.3%
Accommodation and food services	-4,887	-5.6%	8.7%	7.6%
Other services (except public administration)	-3,566	-6.0%	6.0%	5.8%
State and Local Government	1,271	1.8%	7.4%	9.8%
Federal Civilian	-160	-0.8%	2.0%	1.5%
Federal Military	299	2.1%	1.6%	1.0%
Farm	-21	-0.7%	0.3%	1.3%

Table 3*2019 – 2022 Total Employment Values for Northeast Florida Counties*

County	Change 2019 - 2020	% Change 2019 - 2020	Total 2019	Total 2020	Total 2021	Total 2022
Total (Thousands)	-41.451	-24.90%	985.992	944.541	967.743	985.923
Baker County	-0.185	-1.70%	10.639	10.454	10.572	10.687
Clay County	-2.982	-3.90%	76.813	73.831	75.564	77.392
Duval County	-30.25	-4.40%	681.496	651.246	666.803	677.528
Flagler County	-1.396	-3.40%	40.813	39.417	40.47	41.611
Nassau County	-1.356	-3.90%	34.926	33.57	34.317	34.952
Putnam County	-0.928	-3.90%	23.656	22.728	22.917	23.177
St. Johns County	-4.354	-3.70%	117.649	113.295	117.1	120.576

Table 4*2019 – 2022 Gross Domestic Product (GDP) Values for Northeast Florida Counties*

County	Total Change 2019 - 2020	% Change 2019 - 2020	Total 2019	Total 2020	Total 2021	Total 2022
Total (Billions)	-2.296	-3.1%	87.923	85.227	91.375	93.328
Baker County	-0.001	-0.2%	0.544	0.543	0.568	0.581
Clay County	-0.132	-2.60%	5.018	4.886	5.239	5.378
Duval County	-2.16	-3.20%	66.736	64.576	69.169	70.547
Flagler County	-0.046	-2.10%	2.181	2.135	2.301	2.364
Nassau County	-0.055	-2.50%	2.185	2.13	2.265	2.31
Putnam County	-0.069	-3.00%	2.278	2.209	2.348	2.39
St. Johns County	-0.233	-2.60%	8.981	8.748	9.485	9.758

NEXT STEPS MOVING FORWARD

Recognizing the evolving nature of the coronavirus pandemic, the NEFRC remains committed to providing local governments and other entities with the best available information and data to assist with local decision-making efforts.

Staff from the NEFRC will communicate the results of this quantitative study to elected officials in each Northeast Florida county and will also work with local economic development officials to communicate the results of this study to stakeholders in a timely and effective manner. In addition to the results of this analysis, the NEFRC will continue to examine the impacts and will provide additional information to local governments and partners moving forward.

Moving into the next few years, the concept of “Economic Resilience” will be a target priority for the NEFRC and its programs. Economic resilience refers to the ability of local economies to “bounce back” to normal conditions after losing function because of an uncontrollable event. In the face of a disaster, such as a public health crisis or hurricane impact, resilient economies have the capacity to quickly respond to, withstand, and recover from adverse situations.

Through dedicated funding from the U.S. Economic Development Administration (EDA), as well as partnership with local stakeholders and entities, economic resilience will become an area of focus for the NEFRC over the next two years.

For questions about this study, please contact:

Jack Shad, Economic Development Project Manager (jshad@nefrc.org)
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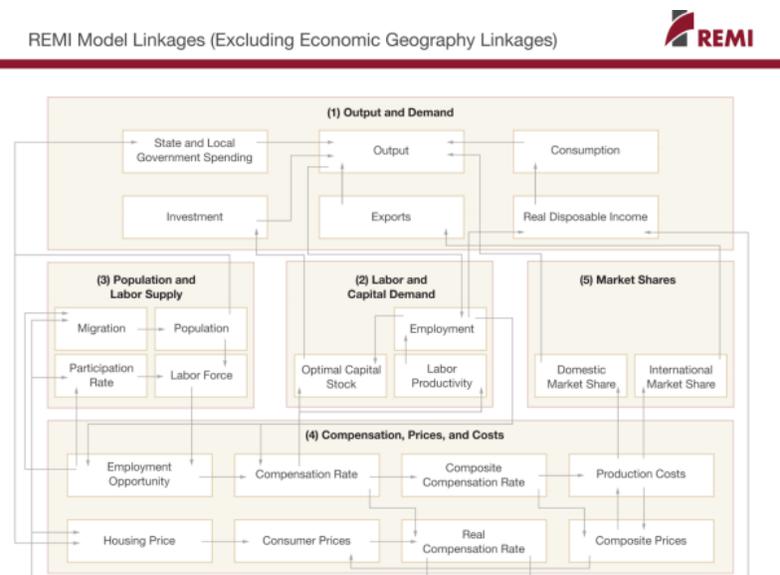
For media requests and press inquiries, please contact:

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Appendix: About REMI PI+ Model

REMI PI+ is a structural economic forecasting and policy analysis model. It integrates input-output, computable general equilibrium, econometric, and economic geography methodologies. The model is dynamic, with forecasts and simulations generated on an annual basis and behavioral responses to compensation, price, and other economic factors. The model consists of thousands of simultaneous equations with a structure that is relatively straightforward. The exact number of equations used varies depending on the extent of industry, demographic, demand, and other detail in the specific model being used. The overall structure of the model can be summarized in five major blocks: (1) Output and Demand, (2) Labor and Capital Demand, (3) Population and Labor Supply, (4) Compensation, Prices, and Costs, and (5) Market Shares. The blocks and their key interactions are shown in Figures 1 and 2.



The Output and Demand block consists of output, demand, consumption, investment, government spending, exports, and imports, as well as feedback from output change due to the change in the productivity of intermediate inputs. The Labor and Capital Demand block includes labor intensity and productivity as well as demand for labor and capital. Labor force participation rate and migration equations are in the Population and Labor Supply block. The Compensation, Prices, and Costs block includes composite prices, determinants of production costs, the consumption price deflator, housing prices, and the compensation equations. The proportion of local, inter-regional, and export markets captured by each region is included in the Market Shares block. Models can be built as single region, multi-region, or multi-region national models. A region is defined broadly as a sub-national area, and could consist of a state, province, county, or city, or any combination of sub-national areas. Single-region models consist of an individual region, called the home region. The rest of the nation is also represented in the model. However, since the home region is only a small part of the total nation, the changes in the region do not have an endogenous effect on the variables in the rest of the nation. For more information, please visit: www.remi.com