



Economic & Fiscal Effects of Remote Workers in Florida

Client: Florida Department of Economic Opportunity (DEO)

Disclaimer:

This is a project performed by M.S. students in Applied Economics. The Applied Project course is the capstone course for the degree of M.S. in Economics. The course is a three-month consulting project that takes the student from the proposal stage through the final presentation and final report.

The students are “hired” as associates in a fictitious consulting company called Applied Economics Research Group (AER Group). The consulting company is **fictitious** and is only mentioned to enhance the realism of the project.

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Introduction

This paper will focus on analyzing both the economic and fiscal effects of remote work on various industries, the labor force, and local governments within the state of Florida. The growth of remote work in Florida has been recently accelerated by the Covid-19 pandemic. Many of the recent transplants to Florida are moving here for several different reasons; escaping harsh lockdown restrictions, the burden of high taxes, differences in the cost of living, or the ability to work remotely, etc. To properly estimate the economic and fiscal effects of remote workers in Florida, we must first analyze trends related to remote work within the state that existed prior to this recent migration of the labor force. Because remote work data and reason for relocation data is not collected by any state or federal agency, we will rely predominantly on third-party survey data to estimate the effects of remote workers within the state.

Regarding the specific industries in Florida that will be studied, this paper will focus on industries that already have a high percentage of remote workers or possess certain job characteristics that have the potential to be done remotely without a loss of efficiency or productivity. The analysis of the effects of remote work on the labor force will focus on income effects, demographic comparisons between groups, and changes to the employment rate. The effects of remote work on local governments within Florida will be focused on various sources of government revenues like sales taxes, property taxes, and corporate taxes as well as fiscal spending programs.

Historical Background

The trend towards remote work and telecommuting is not a recent phenomenon. Industries and employees have been trying to implement remote work solutions for many decades prior to the Covid-19 pandemic. The ability for employees to work remotely has been primarily a function of technological advancements within our society. According to journalist Linda Dishman for the publication *Fast Company*:

“The advancement of technology further allowed workers to use their homes for a dual purpose. Think: alongside the rise of cars to commute from the suburbs to offices in the city came the oil crisis of the early 1970’s... That’s when Jack Nilles was working remotely on a complex NASA communication system that he coined the word “telecommuting.” He went on to coauthor *The Telecommunications-Transportation Tradeoff*, which proposed working from home as a solution to traffic tangles as well as limited resources” (Dishman, 2019).

The next decade was the beginning of the computer age, which further advanced the technological capabilities of firms and their employees and provided exponential increases to employee productivity. These same technology firms were some of the first to implement large-scale remote work policies for their labor force. According to Dishman:

“In the 1980s, companies began officially experimenting with flexible work. For example, IBM installed “remote terminals” in several employees’ homes during that time, and the program flourished to the point that “by 2009, 40% of IBM’s 386,000 global employees already worked at home” (Dishman, 2019).

This was a precursor to the similar patterns for remote work that is currently taking place in the tech industry today. While it sounds like remote work was a large success, columnist David Streitfeld of the *New York Times* adds an important caveat to the historical review of IBM’s remote work policies. He explains the reason for his pessimistic view of remote work, writing:

“...IBM came to a similar decision. In 2009, 40 percent of its 386,000 employees in 173 countries worked remotely. But in 2017, with revenue slumping, management called thousands of them back to the office. Even as Facebook, Shopify, Zillow, Twitter and many other companies are developing plans to let employees work remotely forever, the experiences of Mr. Laermer and IBM are a reminder that the history of telecommuting has been strewn with failure. The companies are barreling forward but run the risk of the same fate” (Streitfeld, 2020).

So, it seems that remote work may be more of a temporary incentive or allowance by corporate management rather than a permanent strategic policy. Thoroughly examining the economic and fiscal effects will help determine if remote work is a practical, long-term solution for different industries in Florida.

The private sector was not the only participant in the remote work experiment in the past few decades. The public sector also became involved over a decade ago when the government used legislation to capture the efficiency and fiscal savings effects that remote work can provide. The federal, state, and local governments employ roughly 20% of the nation’s workforce, so this should provide a large sample from which to study the economic and fiscal effects of remote work. Dishman also writes about the government role in her article regarding the history of remote work in America, stating:

“By 2010, the Government had passed the Telework Enhancement Act, which sought to make telecommuting more secure and effective for Federal employees. The most recent Census report found that 13.4 million people (out of a workforce of 142 million) worked from home, which represented an increase of 4.2 million in a little over a decade” (Dishman, 2019).

Current Events

Prior to the Covid-19 pandemic, approximately 6.2% of the labor force in the state of Florida worked remotely compared to the national average of 5%. According to Richard Florida, a professor at the University of Toronto, “...before the pandemic, between 2-and-15 percent of the workforce were working remotely. Currently, it’s half-to-two-thirds of the workforce.” The growth witnessed in remote work caused by the pandemic is unlikely to reverse itself back to pre-pandemic levels once the economy returns to normal. Results of a survey conducted by CareerCloud show that Florida is expected to experience a 24.3% growth in remote jobs by the year 2028.

Figure 5: Fraction now working remotely, by US State

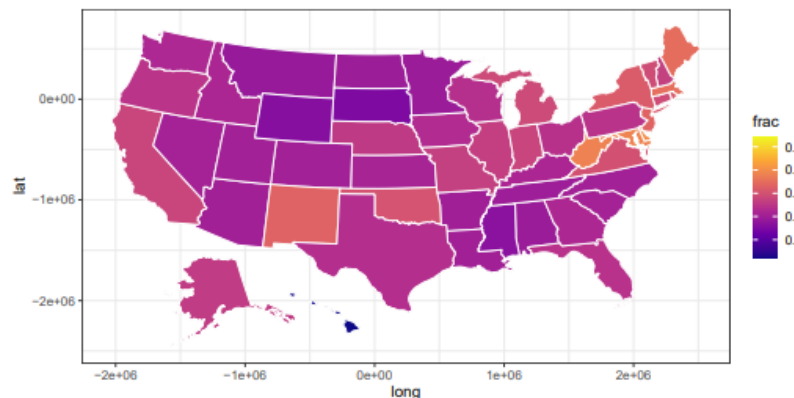


Figure 1
Source: NBER Working Paper

Now that both employers and employees have become acclimated to the possibilities of remote work and finding that there is no noticeable decrease in productivity, neither party seems interested in returning to the pre-pandemic status quo. The demand for remote work or hybrid model positions moving forward will largely be driven by the labor force. According to a recent article about remote work in the *Tampa Bay Times*:

“A study last month by Alexander Bick, an economist at Arizona State University, and two colleagues found that nearly 13 percent of workers they surveyed plan to work from home full time after the pandemic — nearly double the 7.6 percent who did so in February 2020. An additional 25 percent expect to do so at least one day a week, up from 17 percent before the pandemic” (Krisher et al., 2021).

These significant structural changes to the composition of the workforce will undoubtedly have multiple direct and indirect effects across the entire economy of Florida. This hypothesis is supported by recent survey work conducted by the consulting firm PricewaterhouseCoopers:

“Company executives overwhelmingly report that remote work has succeeded during the pandemic, according to research by consulting firm PwC. About 55 percent said they envision allowing continued remote work, according to the survey of 133 executives of mostly large companies.” (Krisher et al., 2021).

The results of the PwC survey provide a good indication of the direction firms and employees are moving with regards to remote work in the near future and each groups expectation.

Over half of employees want to work remotely three days a week or more

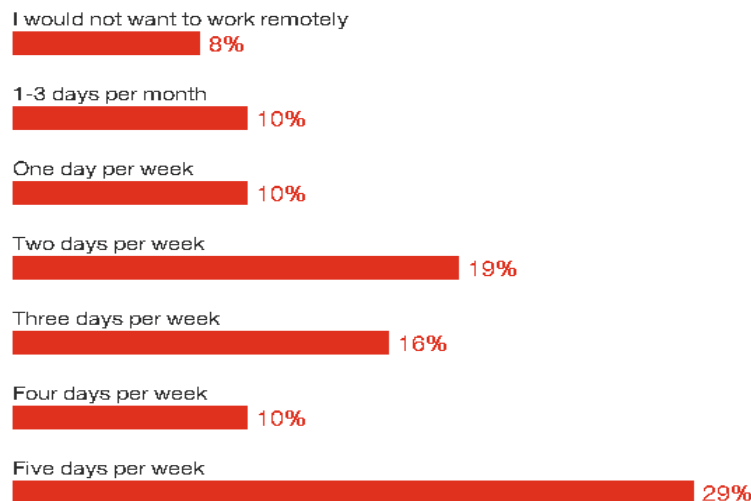


Figure 2

Source: PwC US Remote Work Survey January 12, 2021. Base: 1,200 US office workers

To properly analyze the various effects that remote work will have on the industries and labor force of Florida, the number of remote workers residing within the state for local employers versus out-of-state employers must be properly extrapolated from the currently available data. According to a report produced by the Florida Legislature’s Office of Economic and Demographic Research, “Florida’s population growth of 387,479 between April 1, 2019 and April 1, 2020 was the strongest annual increase since 2005, immediately prior to the collapse of the housing boom and the beginning of the Great Recession” (EDR, 2020).

Florida’s Population Growth...

Typically, Florida’s population growth is from net migration. This year, COVID-19 is expected to slow net migration and also cause natural increase to turn negative sooner than originally expected. Starting in FY 2024-25, net migration is forecast to represent all of Florida’s population growth.

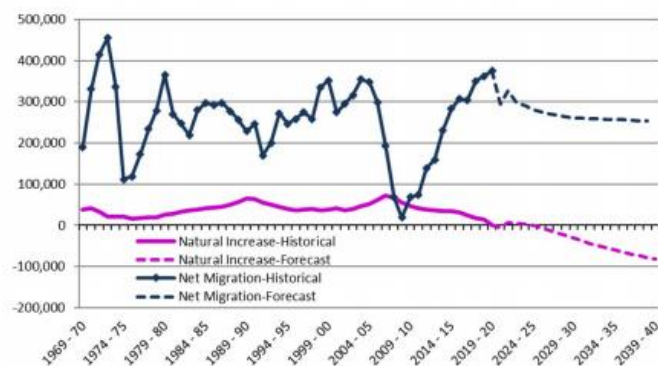


Figure 3

Source: Florida Legislature Office of Economic and Demographic Research, 12/30/2020

The labor demand for remote workers varies by industry and job function. Industries with careers that require higher educational attainment typically have a higher positive relationship to the percentage of employees that can work remotely. According to an article published in the *Tampa Bay Times*:

“In legal services, for example, remote-work postings for jobs including paralegals and legal assistants jumped from under 5 percent in the second half of 2019 to 16 percent in the second half of 2020, according to Indeed data. In banking and finance, for such jobs

as actuaries and loan underwriters, remote-work postings surged from 4 percent to nearly 16 percent. For mental health therapists, they rose from 1 percent to nearly 7 percent” (Krisher et al., 2021).

By identifying which specific industries and careers are the most compatible with remote work, we will be able to isolate and identify the economic and fiscal effects of remote work on each individual industry as well as the labor force.

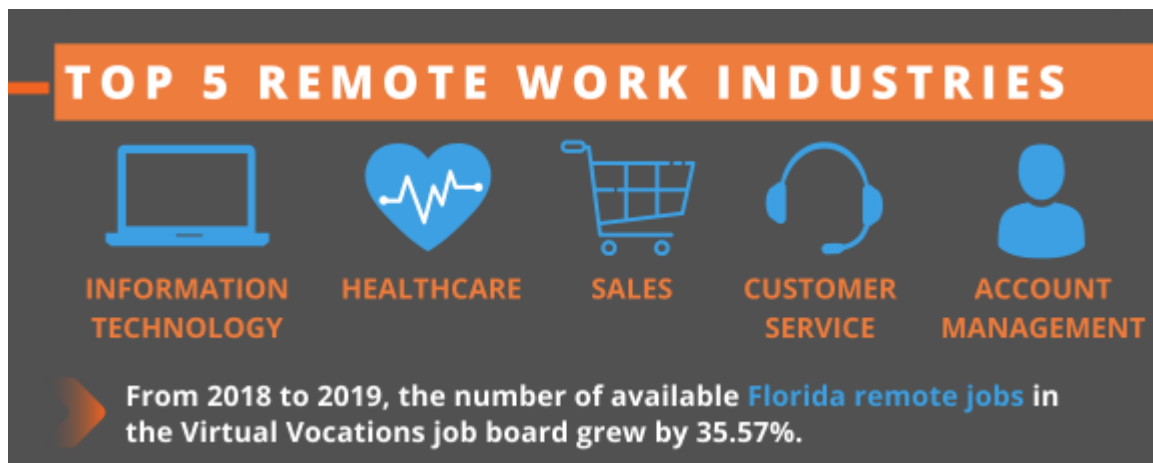


Figure 4

Source: <https://staticblog.virtualvocations.com/2020/04/Florida-Remote-Work-Resources-Infographic.png>

The effects of remote work are not predicted to be evenly distributed across the labor force. To properly study the economic and fiscal effects on the labor force in Florida, any analysis must consider differences between various demographic groups including, but not limited to, age, gender, race, educational attainment, industry, etc. By accounting for these variables, the remaining associated effects can likely be attributed to remote work. According to economic researchers at the National Bureau of Economic Research (NBER):

“The effects of the current crisis on women versus men are likely to be sharply distinct from those of other economic downturns. In recent recessions such as the one in 2008, job losses for men were much higher than for women. One reason is that relatively more

men work in industries heavily affected by a “standard” downturn (such as manufacturing and construction), while women’s employment is concentrated in less cyclical sectors such as health care and education” (Alon et al., 2020).

Additional demographic characteristics should also be examined when studying the effects of remote work on the labor force. We would expect the effects of remote work to exhibit large differences between groups based on marital status and number of dependent children.

Table 6: Telecommuting, for those with children by marital status and gender

	Can Telecommute	Did Telecommute	Days Telecommute
<i>single men</i>	17%	14%	15
<i>single women</i>	21%	18%	19
<i>married men</i>	45%	39%	30
<i>married women</i>	42%	38%	41

Note: Table reports those who said they are able to telecommute (column 1); those that were able and did telecommute (column 2); and the approximate days per year telecommuting, for those which were able. Source: American Time Use Survey, 2017-2018.

Figure 5

Source: NBER Working Paper #26947 “The Impact of Covid-19 on Gender Equality”, April 2020

Many local governments in Florida are currently being impacted by the transition to remote work. They rely heavily on sales and property tax revenues to fund fiscal spending packages and their annual budgets. The uncertainty created by the Covid-19 pandemic along with the structural changes to the labor force associated with remote work has made forward-looking projections and estimates extremely difficult for local governments. According to the tax and accounting consulting firm Grant Thornton “As the consequences of long-term remote work continue to grow in prominence across the country, many states and localities continue to issue guidance regarding the income tax treatment of teleworking employees and business tax nexus policies” (Grant Thornton LLP, 2020).

The Legislative Office of Economic and Demographic Research has updated and refined an empirical analysis of the various sources of the state's sales tax collections. In FY 2017-18, sales tax collections provided over \$24.1 billion dollars or 76.4% of Florida's total General Revenue collections. Of this amount, an estimated 13.4% (over \$3.2 billion) was directly attributable to purchases made by tourists. Preliminary data for FY 2018-19 indicates that the visitor share rose to 14.5% for nearly \$3.7 billion dollars.

**Contributions to General Revenue from Sales Tax (with CST)
Collections in FY 2017-18, By Source**

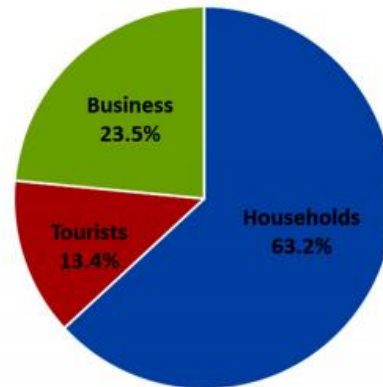


Figure 6

Source: Florida Legislature Office of Economic and Demographic Research, 12/30/2020

Since the onset of the pandemic, many employees have been required to work from home or another remote location instead of their traditional work location, due to the issuance of state and local emergency declarations or stay-at-home orders. In the case of employees who traditionally commuted across state borders to work in the office, employers may be required to withhold state personal income tax based on the employee's home location instead of the office, requiring employers to register for payroll taxes in additional states.

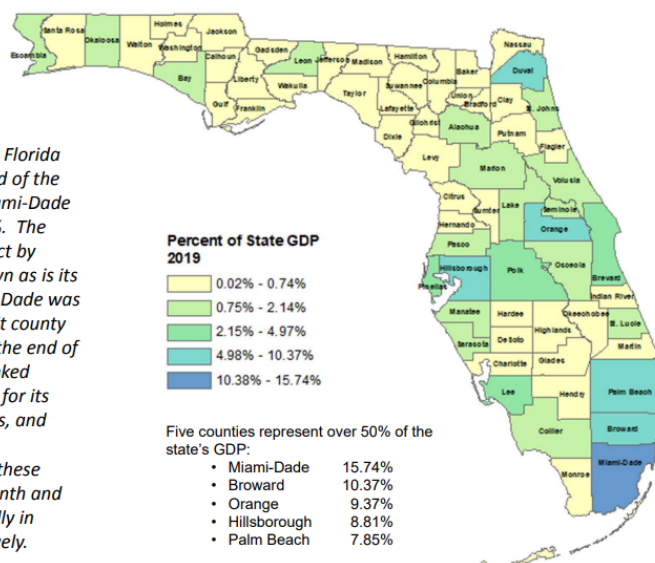
Employers have also been faced with the challenges of potential additional business tax filing obligations as a result of employees telecommuting from jurisdictions in which the employer does not otherwise have a physical presence or other nexus. In response, approximately one-third of the states have issued guidance providing for the temporary suspension of corporation income tax and/or sales and use tax nexus thresholds where the pandemic has forced certain employees to work remotely in a state in which the company would otherwise not have nexus.

Many businesses are cautious about offering telework as an option precisely because it exposes them to taxation in states where they might otherwise have insufficient contacts—the technical term is “nexus”—to be taxable. The COVID-19 pandemic, however, suddenly made that the preferable choice for many businesses across the country.

When businesses engage in economic activity in multiple states, it is necessary to determine which states have a right to tax them and how much of the business’s net income those states can claim. This is where nexus and apportionment come in, and both are affected by telework. Nexus tells us whether a business has sufficient presence in a state for that state to tax any of its activity. Apportionment determines the division of that income to yield the appropriate share for a given state to tax. Without some standards for nexus and apportionment, there would be nothing to prevent states from taxing businesses that have no connection to that state, or from taxing the entirety of a business’s income even though it is also taxed in other states on much or all of that income as well.

State’s GDP by County...

Pre-pandemic, South Florida represented one-third of the State’s GDP with Miami-Dade clocking in at 15.74%. The post-pandemic impact by county is still unknown as is its duration, but Miami-Dade was the state’s hardest hit county by most metrics. At the end of December, it was ranked fourth in the country for its total number of cases, and Broward was ranked thirteenth. In 2019, these counties ranked seventh and seventeenth nationally in population, respectively.



Academic Literature Review

We should decide which academic articles are the most insightful and relevant to our project and write a cohesive summary of the articles that includes quotations and citations.

Florida Industries

This section will be for the economic and fiscal impact analysis of remote workers on the various industries in Florida.

Labor Force

This section will be for the economic and fiscal impact analysis of remote workers on the labor force in Florida.

Local Governments

This section will be for the economic and fiscal impact analysis of remote workers on the local governments in Florida.

Attracting Remote Workers

This section will be for the econometric analysis of attracting remote workers to specific counties in Florida.

Recommendations & Conclusions

This section is for our conclusions and restating our findings from the research above.

References

APA style citations for all sources used in our research project:

Dishman, L. (2019, April 15). *No, remote work isn't a "new" perk-it's been around for about 1.4 million years*. Fast Company. <https://www.fastcompany.com/90330393/the-surprising-history-of-working-from-home>.

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Walczak, J. (2021, March 2). *Working from Home Brings Greater Exposure to State Tax Codes*. Tax Foundation. <https://taxfoundation.org/working-from-home-remote-work-tax-obligations/>.

Erik Brynjolfsson, John J. Horton, Adam Ozimek, Daniel Rock, Garima Sharma, and Hong-Yi TuYe

NBER Working Paper No. 27344

June 2020

JEL No. I15,J21,L23,M15,M5COVID-19 and Remote Work: An Early Look at US Data

Appendix

All of the mathematical formulas, full charts, etc. should be placed in the appendix.