A Study of Regional CARES Act Fraud relationships to Gross Domestic Product, Poverty Level, & Educational Completion per Region

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A Study of Regional CARES Act Fraud relationships to Gross Domestic Product, Poverty Level, & Educational Completion per Region

Emily Watkins

A thesis presented in partial fulfillment of the requirements of the Undergraduate Honors Program at the University of New Haven.

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December 20, 2020

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Abstract

Due to the COVID-19 pandemic the United States government decided to enact Public Law No: 116-136, better known as the Coronavirus Aid, Relief, and Economic Security (CARES) Act, made public law March 27, 2020 (Public Law No. 116-136). Under the CARES Act the government responded to COVID-19 hardships by distributing relief packages to qualifying members and businesses of the community. These relief packages came in the form of various programs; the Paycheck Protection Program (PPP), Economic Injury Disaster Loans (EIDL), and Unemployment Insurance (UI). However, a staggering amount of fraud took place during the issuance of these programs which resulted in money going towards people and businesses who did not require the assistance the CARES Act provided. The purpose of this research is to 1) establish the amount of fraud and percent of fraud compared to state total assistance received that occurred per state as a result of the CARES Act, 2) establish Gross Domestic Product (GDP), Poverty Level, and an educational attainment measurement for each state, 3) show if there is or is not statistical significance with the relation of these measurement factors against the percent of fraud in each state. All numbers collected and calculated will be shown by region (i.e Northeast) as well as individual state (i.e Connecticut) for the integrity of the research. This will show if there is a direct correlation between the economic and educational status of individuals or businesses that attempted to fraud the government out of CARES Act funding. The cumulative information can be used to determine if education or economic stability can decrease the level of Fraud that the government experiences and where educational or economic resources should be supplied based on the level of fraud in each state and geographic region.
Introduction

The Coronavirus Aid, Relief, and Economic Security (CARES) Act was put into effect by the United States government in order to decrease the harsh effects of the COVID-19 pandemic had on its citizens. The CARES Act did this by distributing money to those that qualify. However, due to the large amount of money that the government flooded the economy with there was an increasing amount of fraud. The goal of this research is to find if there is statistical significance between gross domestic product, poverty level, and/or educational completion with the amount of fraud that took place in each state and each region. The purpose of doing this is to help determine if there is anything that the government can do to step in and either additionally help people in need or educate people if need be. The goal would be to give the government the numbers to be able to target people who have a high probably of committing fraud based off of gross domestic product, poverty level, and educational completion.

This paper is organized into two major parts. The first of which being the proposed methodology. This section will take the reader through where data is collected from, the parameters of the data collected, the calculations of the data, and execution of base line graphs that have been created to review gross domestic product, poverty level, and educational completion per region. The second part of this paper is the literature review. This section consists of the review of data which is put into easy-to-understand graphs. As well as the review of articles which touch upon individual points having to do with CARES Act funding and poverty level.
Proposed Methodology

This research consists of secondary quantitative data obtained while meeting all 4 validity factors: construct, content, face, and criterion. Data was collected using government measurements from the Bureau of Economic Analysis, the United States Census Bureau, Economic Research Service of the U.S. Department of Agriculture, U.S. Department of Commerce, Economics, and Statistics Administration of the U.S. Census Bureau, the Congressional Research Service combined with the U.S. Treasury, and The United States District Courts. Data including region of each state, total CARES Act allocation to each state, gross domestic product per quarter for 2020, 3-year poverty level average from 2018-2020, college completion rates from 2015-2019 of adults 25 and older, and dollar amount of each individual Fraud case organized by state and region was compiled using Microsoft Excel. Collection of all fraud amounts was done using case reports from different United States District Courts. Each amount, date, and state were identified in order to provide full transparency and allow other to track the cases. Individuals’ names that were charged and the case number will not be shown for privacy purposed. All case reports are collected from Arnold & Porter CARES Act Fraud Tracker, last updated November 22, 2022. A disclaimer that the tracker from Arnold & Porter is constantly being update and the most current update of November 22, 2022 are the numbers represented in this report. Arnold & Porter serves as a law firm specializing in litigation, regulatory law, and transactional law. As data is being compiled from government sites by hand there will be no accounting for missing data. No outliers will be removed from data as they will help to serve as significant indicators to the relationship between fraud and the economic stability and educational indicators of states and regions. Data points not recognized
include accounts of fraud in Guam, Puerto Rico, and the Virgin Islands as those areas did not fall under the region category.

The percent of total funding based on the total Coronavirus Aid, Relief, and Economic Security (CARES) Act allocations, the average gross domestic product, poverty level, and college completion were calculated per region using excel. Then they were compared to each other as well as the fraud that took place within each region. Excel was used to construct data tables and graphs showing the relationship between each indication (GDP, poverty level, college completion) and all indicates together to help determine if there is a relationship.

If a relationship can be seen a regression will be initiated, via excel, to determine if the data has statistical significance. If no statistical significance can be found there will be no relationships between economic and educational indicators and fraud due to the CARES Act. If statistical significance can be found there will be a relationship between economic and educational indicators and fraud due to the CARES Act which will allow for data backed action suggestion to be given to avoid further fraud within the distribution of government money. The P-value and Multiple R value results from regression analysis will serve as indicators of statistically significant relationships. A P-value, also known as a probability value, is a number that is used to show how likely a data point is to occur again under a null hypothesis. Multiple of R is a numerical value that shows the correlation between the 2 sets of data points.
Literature Review

This section serves to represent the research and data collected that will serve to identify the defined parameter and give background analysis of individual data sets. This sections also serves as a representation of all comparative data collected.

Geographical Parameters

State use of Coronavirus Relief Funds (CRF) from the CARES Act and fraudulent related funds from the CARES Act was calculated individually per state. Then numbers were grouped together based on regions defined by the U.S. Census Bureau (U.S Census Bureau, n.d). These regions serve as a baseline for all data being collected. It should be noted that Guam, Puerto Rico, and the Virgin Islands, although they did experience fraud, were not grouped into the identified regions.

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The Coronavirus Aid, Relief, and Economic Security (CARES) Act became public law on March 27, 2020, number 116-136. The goal of the CARES Act was to provide resources towards keeping workers employed and paid and maintain economic stability through the implementation of the Paycheck Protection Program (PPP), Economic Injury Disaster Loans (EIDL), and Unemployment Insurance (UI). The Paycheck Protection Program (PPP) was an eight-week cash assistance program that helped small business, who maintained their payroll, through the assistance of federally guaranteed loans. The PPP could be used to assistance of payroll payments to employees or employee salaries, paid sick leave payments, and supply chain disruptions. The Unemployment Insurance that the CARES Act brought to the table was meant to help someone for up to 39 weeks after losing their job due to COVID-19 while searching for a new one. To qualify the CARES Act did set 4 requirements (Public Law No. 116-136). The Economic Injury Disaster Loan (EIDL) part of the CARES Act could be used by small businesses, small agricultural cooperatives, and private nonprofit organization. The EIDL could be used by these businesses to cover working capital or expenditures that were deemed regular, such as health care benefit, rent, utilities, and fixed debt payments. In order for businesses to qualify for Economic Injury Disaster Loans there were three eligibility requirements they had to meet (U.S Small Business Administration, n.d).

The government chose to flood the market with money in order to keep it running smoothly. In February 2021 the Congressional Research Service published *General State and Local Fiscal Assistance and COVID-10: Background and Available Data*. In this work there is a breakdown of what each state received in terms of Covid Relief Funds from the CARES Act.
(Driessen, 2021). The compilation of data begins with these numbers. After all states were broken up into region the total amount of Corona Relief Funds from the CARES Act were added per region and the percent of total Corona Relief Funds (CRF) per Region was calculated. The results below show a breakdown of the percent of total Coronavirus Relief Funding each region received. The Northeast received the least amount of funding, and the South received the most amount of funding.

![Percent Total CRF Allocation per Region](image)


CARES Act Fraud

Due to the rapid release of Corona Relief Funding, there was a substantial amount of fraud that took place. In response to the sudden rise of fraudulent CARES Act funding the Department of Justice made an announcement. On Friday, March 26, 2021, the Department of Justice announced they had charged “474 defendants with criminal offenses based on fraud...
schemes connected to the COVID-19 pandemic” (U.S Department of Justice, 2021). The Department of Justice goes on to give details on how each program inside of the CARES Act is being defrauded. The Paycheck Protection Program (PPP) fraud is taking place in a range of ways. Business owners are inflating their payroll, bringing back dormant corporation, or even purchasing shell companies that have no real operations. Economic Injury Disaster Loans (EIDL) were intended to provide loans to non-profit entities, agricultural entities, and small businesses. Fraud within EIDL was primarily done by people creating new businesses, shells, or businesses that do not exist and moving around the loan funds for illegal purposes. The Department of Justice explained that their response to EIDL fraud is primary through the efforts of the US Attorney’s Office for the District of Colorado and their partners at the US Secret Service. Another part of the CARES Act is Unemployment Insurance which is being targeted primarily by international organized criminal groups who have stolen identities to file for unemployment benefits. The Department of Justice has chosen to respond with the create and implementation of the Unemployment Insurance Fraud Task Force which comprises more than eight different federal law enforcement agencies (U.S Department of Justice, 2021).

Due to the increasing number of fraud cases regarding the CARES Act people have begun tracking the fraud cases. One company that does this is Arnold & Porter. Arnold & Porter is a multinational law firm known as one of the most prestigious firms in the world. They put together something called the CARES Act Fraud Tracker with major contributors being Jonathan E. Green, Partner & Co-Chair Anti-Corruption, Kevin M. Toomey, Partner Financial Services, and Matthew Bemis, Associate General Litigation (Green, Kouassim Kumi, Bemis, Toomey, 2022). In this tracker Arnold & Porter keep track of the date, program, defendant name, charges, amount, summary, and case files where applied. For the purposes of these
research the date, amount, and state are used. This data was compiled to figure out how much of each state’s CARES Act funding was determined as fraudulent. Then a percent per state and percent per region was calculated to determine what region the most fraud occurred in.

![% Total Fraud](image)


The above graph shows the data compiled. The results show that although the Northeast region had the least amount of funding, they had the greatest amount of fraud. The least amount of fraud came from the Midwest Region and the South region which received the greatest amount of funding had the second highest percentage of fraud.

**Gross Domestic Product**

To determine if there is a correlation between Gross Domestic Product (GDP) and the amount of fraud that took place within a state and region the GDP must be measured. Gross Domestic Product (GDP) is the value of goods and services produced that acts as a measurement...
of economic growth. For this research Real GDP was used. Real GDP is adjusted to remove any effects of inflations over time so that different periods can be accurately compared (U. S Department of Commerce, 2020).

The Gross Domestic Product (GDP) per state was taken for the 1st quarter, 2nd quarter, 3rd quarter, and 4th quarter, as well as averaged to compare to the amount of fraud that took place around the CARES Act.

The result of this data is above. The trend follows what happened to the economy. At the beginning of 2020 (quarter 1 and quarter 2) there were negative trends. Then there was a spike in quarter 3. An average was used of all 4 quarters when running comparative analytics.

**Poverty Level**

To determine if there is a correlation between poverty level and the amount of fraud that took place within a state and region the poverty level had to be measured, collected, and evaluated. Poverty level was taken from the United Stated Census Bureau. The United States Census Bureau uses a set income threshold to determine who is in poverty. The set income does vary based off of a family’s size and composition and is updated for inflation but does not vary geographically.

The Center on Poverty & Social Policy at Columbia University recently wrote a piece called *The CARES Act could reduce poverty to precrisis levels if access is adequate*. This article mentions that the CARES Act fails to help people who actually need the funding because many eligible families are actually struggling to receive their CARES Act benefits. As a result, the immediate hardship a family is experiencing is not shown in the poverty level rating (Columbia University Center on Poverty and Social Policy, 2021). This suggests that there will be a statistical significance between poverty level and fraud. It suggests that the lower the poverty level the higher fraud cases will be because if the poverty level is high the funding is harder to obtain for citizens meaning they cannot even get funding they are due, so they are definitely not getting funding they are not due. What the combination of the data found was that this was not the case. There is no statistical correlation between poverty level and regional fraud percentages.

**Educational Measurement**

To determine if there is a statistical correlation between educational measurement (college completion) and the amount of fraud that took place within each state and region the college completion rates must be measured, collected, and analyzed. The college completion rates are being taken from the Economic Research Service U.S. Department of Agriculture. The qualifications that mark someone as completing college is that must have received a bachelor’s degree or higher and be 25 years of age or older (U.S Department of Agriculture, 2021). This measurement will help determine if the educational level of a person means they are statistically more or less likely to commit fraud.

**Correlations**
The above graph shows the combination of both the percent per region of CARES Act funding and the percent per region of CARES Act fraud. What can be seen here is a similar relationship between three of the regions while one region stands out. The three regions that follow a trend are the West, South, and Midwest regions. All of them show that their percent of funding was higher than their percent of fraud and show a positive relationship were if funding increased fraud increase. The outlier in this is the Northeast. The Northeast had the least amount of funding meaning it should have had the least amount of fraud if it were to follow the other regions. However, the Northeast had the highest amount of fraud, leaving the rest of the regions behind by more than 10%.

The graph above serves to show all the data collected previously. The lines on this graph show the staggering relationship between percent of funding and percent of fraud. The other bars on the graph show GDP, poverty level, and educational index. From just a glance it seems that there is a positive relationship between poverty level and funding which would
indicate that the areas that needed more money received more money. Next, the use of comparative regressions will be used to see if there is a statistical significance between any of the indicators and the fraud that took place.

**Comparative Regressions**

The graph above shows the line regression run with the percent of CARES funding per region and the percent of CARES fraud per region. This data found that there was no correlation or statistical significance between the two groups of data. This may have been due to the fact that the fraud took a staggering increase in the Northeast instead of following a similar trend to the other regions.
The graph above shows the linear regression run with the data points from poverty level and percent fraud per region. This regression also found that there was no statistical relationship or correlation between these two groups of data. This was an interesting find as most news outlets felt as though more fraud would be happening in places with lower poverty levels. This was because they felt as though the people who actually needed the money, those with higher poverty levels, were not receiving it. However, if this was the case we would have seen a negative correlation with this data grouping and no correlation was found.
The graph above shows the linear regression with Multiple R and P-value calculated numbers below. The result of these calculations show that there is a relatively high positive correlation between the percent of fraud and GDP. This means that as GDP increases so is the likely hood that fraud will occur. This result informs us that regions that are wealthier or doing better off were more likely to commit fraud. This is in line with the hypothesis because places with higher GDP should have received less funding so that would mean if fraud took place, it would take place where money wasn’t supposed to be.
The graph above along with the Multiple R and P-value are for the percent of fraud regionally and the educational index. The result of this regression can be found within the Multiple R value. The Multiple R value indicates that that there is a high positive correlation. Like GDP, this means that as the educational index increases so does the likelihood that someone will commit fraud. This result indicates that the more educated a population the more fraud that population commits. This is also conducive with the hypothesis as people who know how to commit fraud are going to be the people who are highly educated. The people with college degrees will understand how to create a fake business, fill out the complex forms, steal people’s identities and take money in their name, and overall think that they are smarter than the government.
Conclusions

As a result of this research, we have found that as GDP increases, and educational index increases so does the probability of fraud. Many things can be done now that the regions with a higher likelihood of fraud have been identified. The first thing is that the government can begin to investigate those areas more heavily. This is not the best result as it will target a select group more than others and can mean some fraud in other locations could slip through the cracks. Another way to go about decreasing fraud in this area, if the government were to ever need to hand out funding again, would be to create a very detailed warning. People will always commit fraud but if people understand the risks and know that action will be taken, they may be less likely to abuse the system. Another thing that would help with this would be to crack down on fraud this time around. If people have already been accused of fraud once they may be hesitant to do it again. The last option would be to make it harder for people in these regions to be able to get ahold of funding. By doing this the government could decrease the amount of fraud in those areas and reallocate the money to people who actually need it as we did find that the regions with higher GDP and educational index also had higher poverty levels indicating they would not need the funding as bad as other regions.
Bibliography/References


Public Law No. 116-136 - Coronavirus Aid, Relief, and Economic Security


