Impact of COVID-19 on Household Income Across Demographics

MSIS2407 – Data Analytics Using Python

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Introduction

The Coronavirus disease (COVID-19) has rapidly impacted our day-to-day life, businesses, slowing down the global economy. The pandemic has led to a dramatic loss of human life worldwide. There were many challenges in the diagnosis, quarantine, and treatment of suspected or confirmed cases, overload on doctors and other healthcare professionals who were at very high risk and, a disruption of medical supply chain

The economic and social upheaval caused by it such as border closures, trade restrictions led to the curtailment of manufacturing essential goods, deceleration in the supply chain of products impacting the markets adversely. Millions of enterprises faced an existential threat and more than thousands of people in the workforce lost their jobs which affected their household income tremendously creating an imbalance in their savings as well as expenditures.

Apart from these visible disruptions caused by the pandemic, through our project, we have aimed to analyze how COVID impacted various sections of society. Our Project was divided into four parts as follows:

- How did Covid impact household income?
- Did Covid worsen the pre-existing wage gap between genders?
- Did Covid worsen the pre-existing wage gap across races?
- What were the corresponding investment changes in terms of savings and expenditure?

The objective was to get a concrete picture of the current socio-economic scenario, correlate it with the monetary implications of the ongoing pandemic, and help policymakers draft recommendations. This leads to better living conditions of minorities and disadvantaged communities, and positively impacts entrepreneurship, representation, and diversity across industries.

Household Income and the Subsequent COVID-19 Impact

Data Collection and Objective

This section of the project focuses on analyzing one of the most fundamental metrics of a nation's economic health: household income. With the world still reeling from the Coronavirus pandemic, its adverse effects have been widely felt by people and institutions belonging to all socio-economic strata.

This analysis delves into the median income of US households while touching upon how COVID-19 has impacted the same. This study is executed through the following three segments and their corresponding data subsets:

- Segment I: Analyzing Overall Median Household Income
- Segment II: Analyzing Median Household Income across States
- Segment III: Analyzing Median Income Across Different Types of Households

To ensure authenticity and accuracy, all datasets were sourced through the United States Census Bureau at https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-households.html. This has been primarily collected via the US Census Bureau, Current Population Survey, 1981 to 2021 Annual Social and Economic Supplements (CPS ASEC). Further information on confidentiality protection, sampling error, non-sampling error, and definitions is available at https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar21.pdf.

Methodology

Throughout the course of this project, several analytics-oriented techniques have been implemented, such as data cleaning, data wrangling, data exploration, statistical analysis, graphical representation, etc. The detailed methodology / approach is outlined as follows:

1. Collecting the source datasets and categorizing them in the current working directory
2. Importing the necessary libraries such as pandas, matplotlib, and NumPy
3. Storing the source dataset(s) as dataframe(s) using pandas Excel reader (considering the source data format was .xlsx and not .csv)
4. Performing quick sanity checks by checking for null values (NaN), resolving them (if any) by replacing NaN with zeroes, and dropping duplicates (there weren't many anomalies since the source data was well structured)
5. Slicing the dataframe(s) to get the median income data of past 10 years and dropping columns which weren't essential for the analysis in question
6. Using indexing functions such as loc and iloc in order to filter the data
7. Deriving the descriptive statistics of the median income data for each segment to summarize and quantitatively describe the values under consideration
8. Computing the percentage change of median income to determine the exact measure by which household income has either declined or increased year-on-year
9. Sorting the states by greatest percentage decline in median household income to identify the worst-hit areas and to also explore if any state reported marginal increases in household income
10. Tracking household income trends to better understand the impact of Covid, the annual median income tables were split using 2019 as the demarcation point, post which further analysis were performed in the form of timeline-specific descriptive statistics, percentage decline in income, etc.
11. Merging isolated dataset(s) on common parameters and appending new columns to the consolidated income dataset in order to consolidate median income information wherever required for further analysis
12. Bifurcating family households into married-couple, male-only families and female-only families, and non-family households into male and female householders for enabling in-depth understanding of how Covid has trickled-down the US economy
13. Plotting various data such as overall median income, state-wise median income, and annual percentage decline of income to observe the trend of decline post-Covid across the US

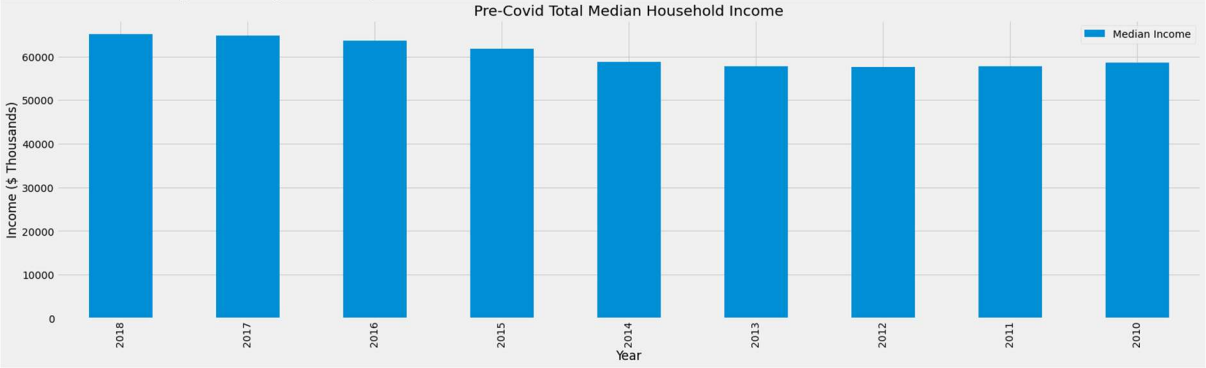
economy, each US state, and individual types of households in the US such as family, non-family, etc.

14. Employing varied forms of graphical representation for each analysis such as line plots, bar plots, clustered graphs, etc. using custom plot styles for improving comprehensibility of the information
15. Performing supplementary functions like transposing the dataframe, renaming columns, assigning header/index, changing data types, setting plot styles, etc. for smoother manipulation of inputs and enhanced clarity of outputs

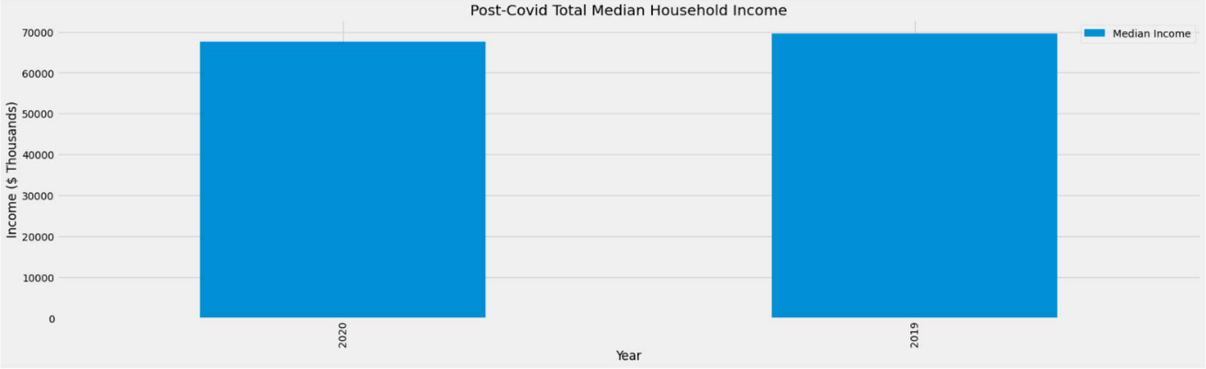
Inferences

Segment I: Analyzing Overall Median Household Income

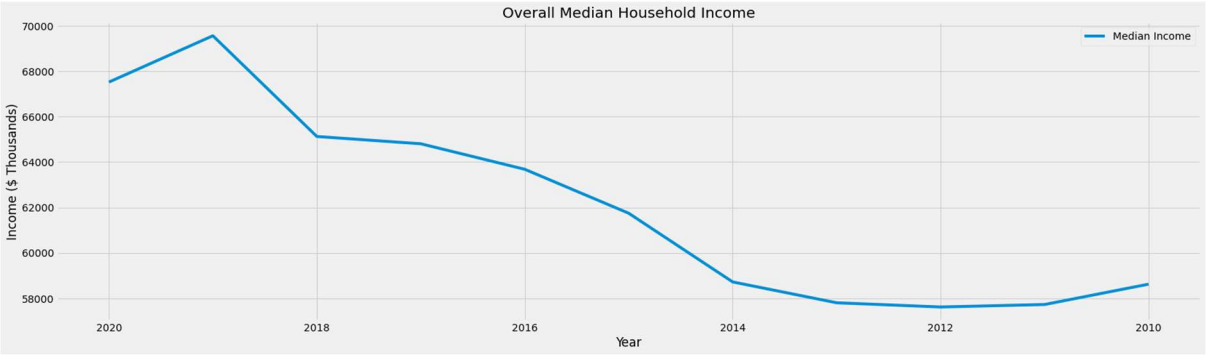
1. Before COVID hit, there has been a fairly steady progression of household income ranging between 3 to 6 percent year on year.



2. However, the impact of COVID has been adverse enough to push the median household income down to a staggering negative 3 percent from 2019 to 2020.

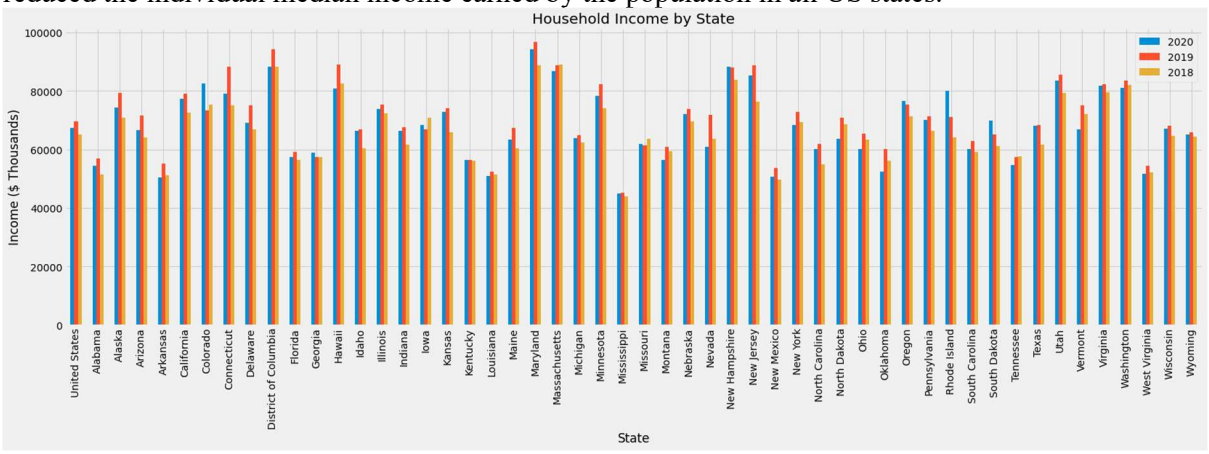


3. This could be inferred from the fact that the 2020 median income was only USD 67,521 in comparison with the earlier 2019 median of USD 69,560. This is the first statistically significant decline in median household income since 2011.

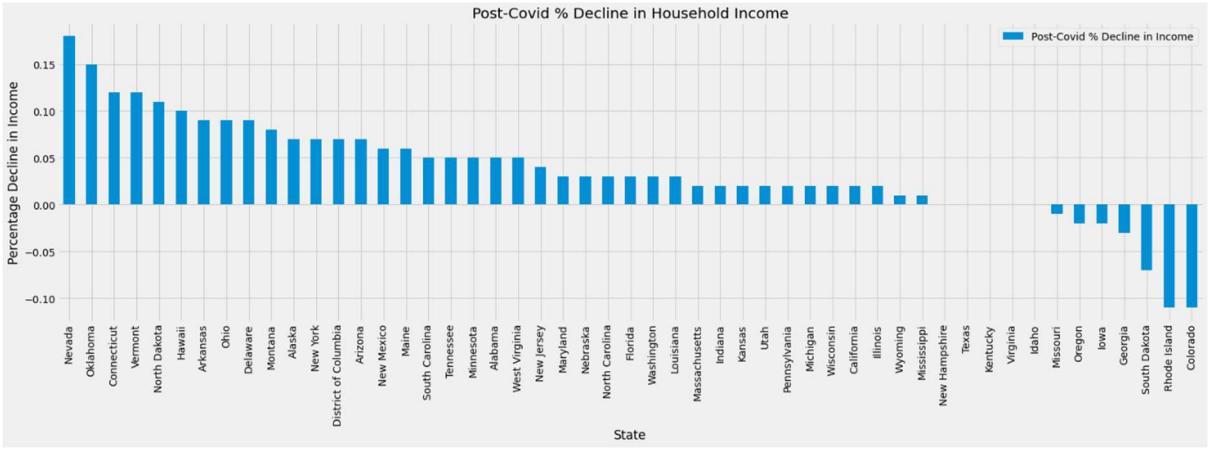


Segment II: Analyzing Median Household Income across States

1. While mapping the composition of national decline, it is evident that COVID has substantially reduced the individual median income earned by the population in all US states.



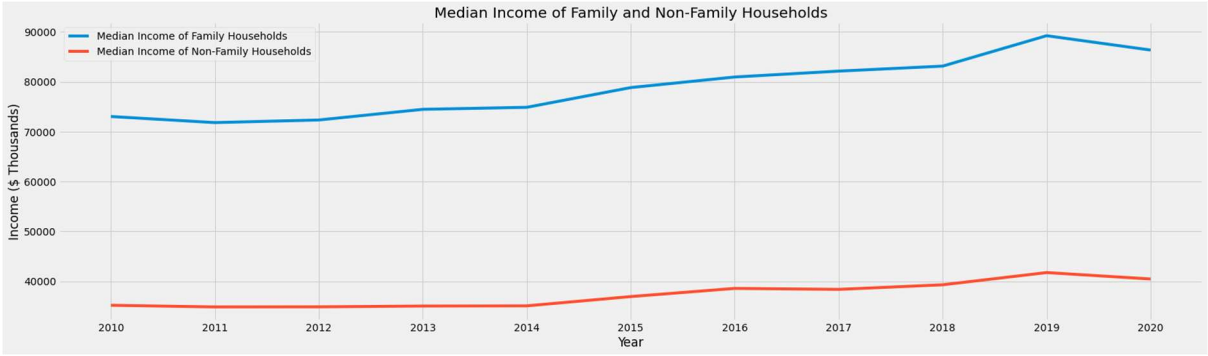
2. In particular, ranking the percentage decrease of median income has shown that the following 6 states have been the worst hit of all, since their decline measures over 10%:
   (i) Nevada at 18%
   (ii) Oklahoma at 15%
   (iii) Connecticut at 12%
   (iv) Vermont at 12%
   (v) North Dakota at 11%
   (vi) Hawaii at 10%



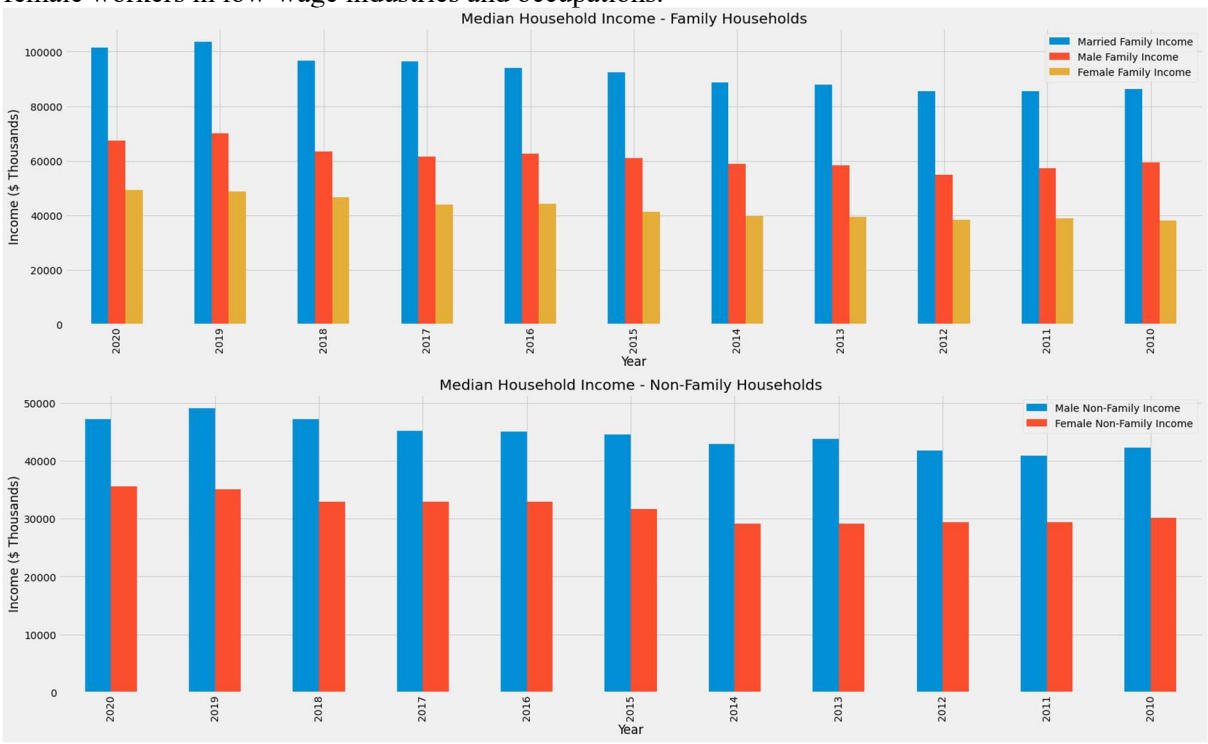
3. Of all 50 US states, only the following three have reported a positive growth of over 5 percent:
   (i) South Dakota at 7%
   (ii) Rhode Island at 11%
   (iii) Colorado at 11%

Segment III: Analyzing Median Income Across Different Types of Households

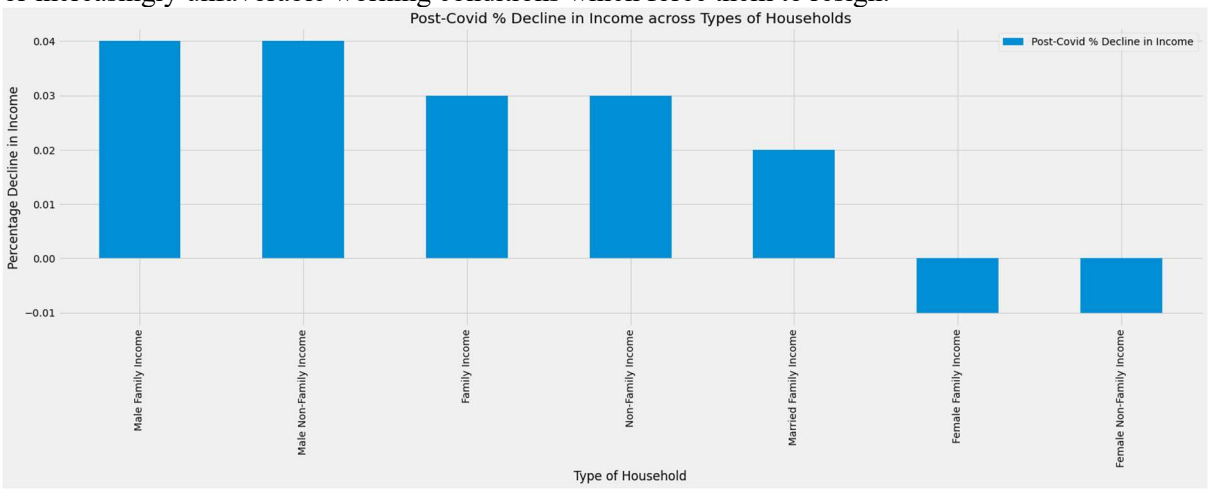
1. During the analysis of the trickle-down impact, it could be statistically deduced that 2020 real median incomes of family households and nonfamily households decreased 3.2 percent and 3.1 percent from their respective 2019 estimates. This is because there is a higher probability that there could be a more marked decrease in a family's household earnings (considering multiple householders would be employed).



2. The only households to show "increased" income post COVID were female family and non-family households. Despite the irony, the reason earnings grew was because the decline in full-time, year-round workers was concentrated among female workers with lower earnings and female workers in low-wage industries and occupations.



3. This is largely attributed to targeted unemployment either through desired attrition of women or increasingly unfavorable working conditions which force them to resign.



COVID-19 Impact on Existing Wage-Gap Between Men and Women

Data Collection and Objective

The focus was to get data on women in the workforce as well as their earnings compared to men. The primary sources were census.gov and the U.S. Bureau of Labor Statistics - https://www.bls.gov/cps/earnings.htm . The datasets used were all derived from Women's earnings tables-2019 & 2020.

These tables included data for Women's earnings as a percentage of men's earnings from 1979 to 2019, median earnings understand COVID-19 impact and workforce data for 2019 & 2020 along with other subsets used in this analysis.

The analysis includes:

- Existing Wage-Gap for salaried & self-employed men and women in the US
- Pre & Post Covid Analysis
- Women's earnings as a % of men
- The impact on wage gap between the genders based on race, post covid.
- Wage Gap based on education levels of women and Covid-Impact on Women's earnings based on their age.
- Changes in the total workforce, number of male workers and number of female workers due to Covid between 2019 & 2020 based on age.
- COVID impact on income levels of women based on age.
- Covid-Impact on Women's earnings based on their Marital Status.

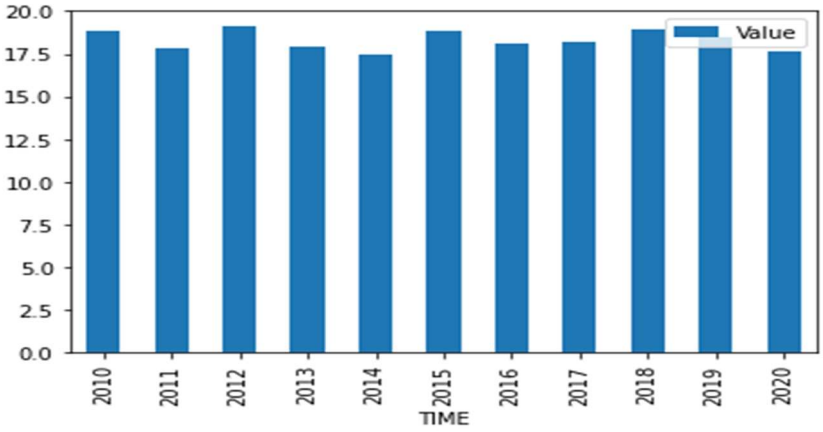
Methodology

- Import all the necessary libraries – pandas, matplotlib and numpy
- Using CSV reader, read the excel files and store them as pandas dataframes
- Sanity checks – drop duplicates. (Most datasets did not contain duplicates and were well structured due to the credibility of the source)
- Some columns that weren't necessary for the analysis were dropped from the datasets.
- Loc function was used to filter the data
- Bar graphs and line charts showing various comparisons are displayed for all datasets.
- Average, minimum and maximum values were computed for analyzing wage-gap between salaried / self-employed men & women.
- The describe function was used to understand statistical changes pre & post covid.
- To understand the changes pre & post covid, the annual earnings table for 2019 and 2020 were merged for further analysis.
- Percentage change was computed, and new columns was appended to the data frame which were later used to plot bar graphs.
- Miscellaneous functions such as renaming columns and customizing the charts was also included to make the output more efficient.

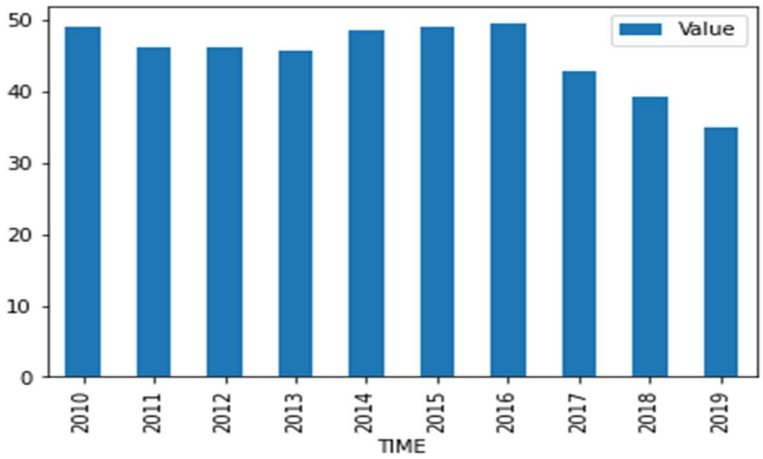
Inferences

Salaried & Self – Employed

- The average wage gap in the last 10 years between salaried men & women in the US is 18.3 percent. The wage gap has been in the range of 17% to 20% since 2005 and has reduced to about 17.4% in 2020.



- The average wage gap in the last 10 years between self-employed men & women in the US is 45.1791473387 percent. In 2019, the wage-gap stood at 34%, and was on a consistent decline since 2016.

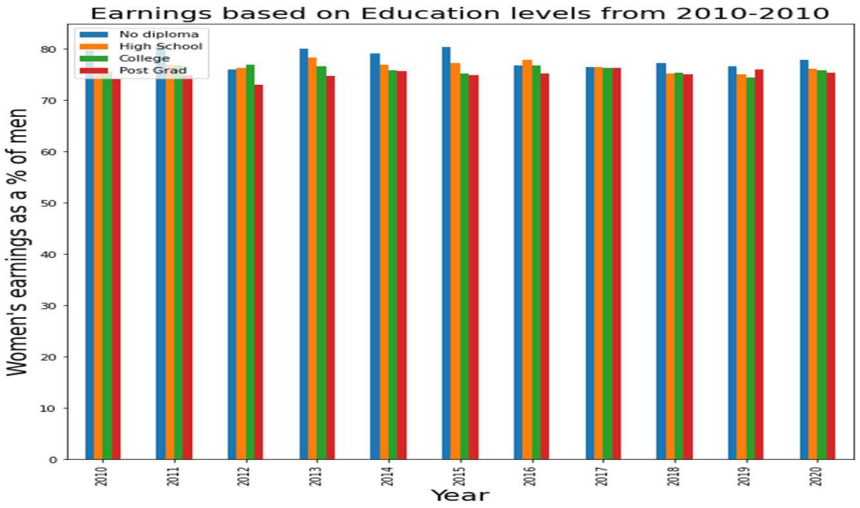


Wage-Gap across races

- The wage gap seems to have stayed consistent pre and post covid with very minimal changes across Black, White & Hispanic women.
- Women of all races seemed to have earned more in 2020 as a percentage of men's earnings in their respective races than in 2019.

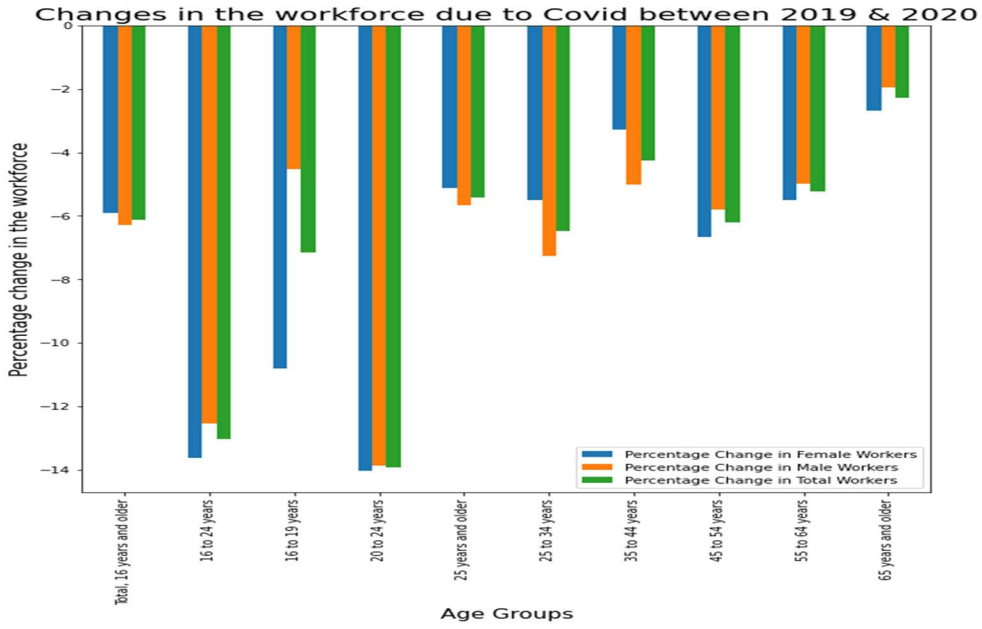
Wage-Gap based on Education levels

- Average income for various education levels is in the range of 71.4% to 73%. The wage gap stays consistent across all education levels when we measure it as a percentage of men's earnings with the same educational qualification. This indicates that women are consistently paid lesser even though they have the same qualification as their male counterpart.

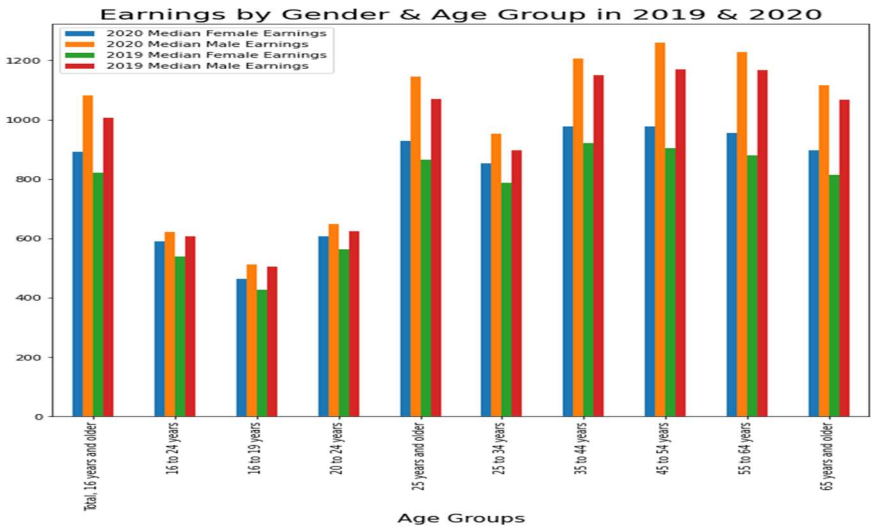


Covid-Impact on Women's participation in the workforce and earnings based on their age

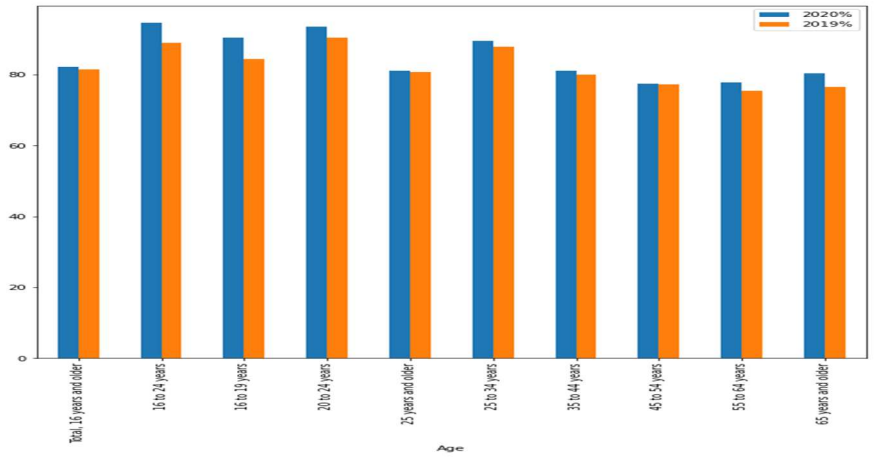
- The highest decline in number of women in the workforce was attributed to the 20-24 years age group while >=65 remained least affected. It should also be noted that there was a higher decline in the number of women in the workforce in most age groups compared to men.



- The earnings have increased between 2019 and 2020 with the >65 group showing the highest increase. However, this increase may be driven by lesser number of women in the workforce rather than actual increase in income levels.
- The Wage-gap remained consistent pre & post covid.

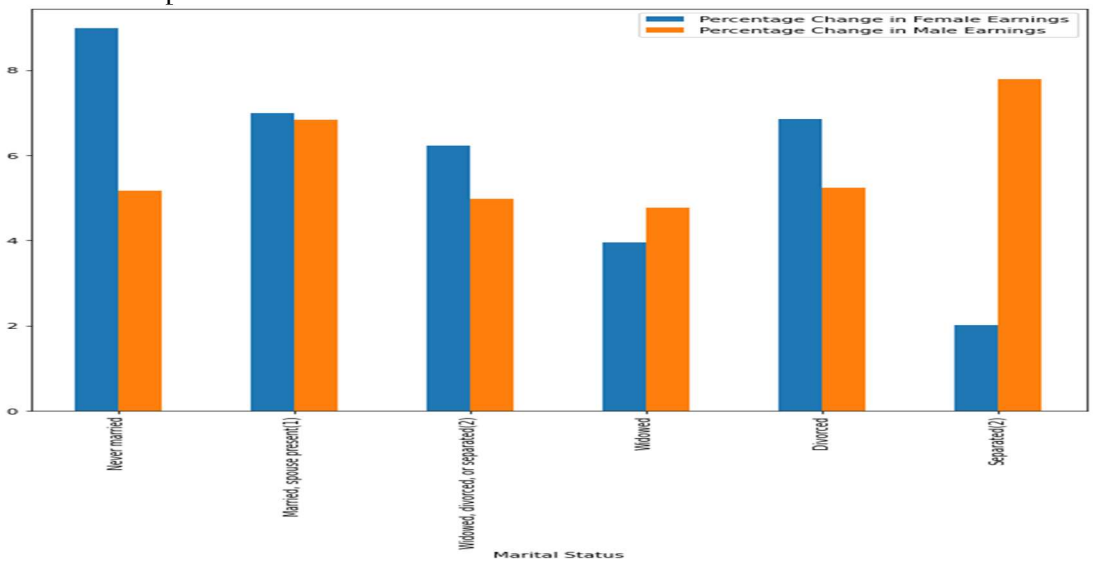


- In every age group, the earnings of women as % of men have marginally increased. However, due to similar levels of decline of women in the workforce, it would be safe to conclude that COVID did not increase or decrease the wage gap significantly.



Covid-Impact on Women's earnings based on their Marital Status

- Based on the percentage changes in income between 2019 & 2020, there seems to be little correlation between a woman's marital status and her absolute income levels as well as income levels compared to men with the same marital status due to COVID-19



COVID-19 Impact on Existing Wage-Gap Across Races

Data Collection and Objective

The aim was to understand the impact of COVID-19 across all races. For the purpose of better analysis , several metrics were taken into consideration as follows:-

- Employment status by Education Across races(Number in Thousands)
- Mean Income Summary Measures by Selected Characteristics
- Annual Median Income Across All Races from 2010 to 2020.
- Employment Population Ratios across all races per quarter of 2020 and comparing ratios with 4th quarter 2020 vs 2019
- Unemployment Rate Across All Races per quarter of 2020 and comparing results of 4th quarter of 2020 from 2019 4th quarter
- Median usual weekly earnings annual averages, 2019–20 (in $) Across Races
- People in Poverty Across All Races 2020 vs 2019

Census.gov and the U.S. Bureau of Labor Statistics were the prime core sources for all the datasets used. Links are as follows:-

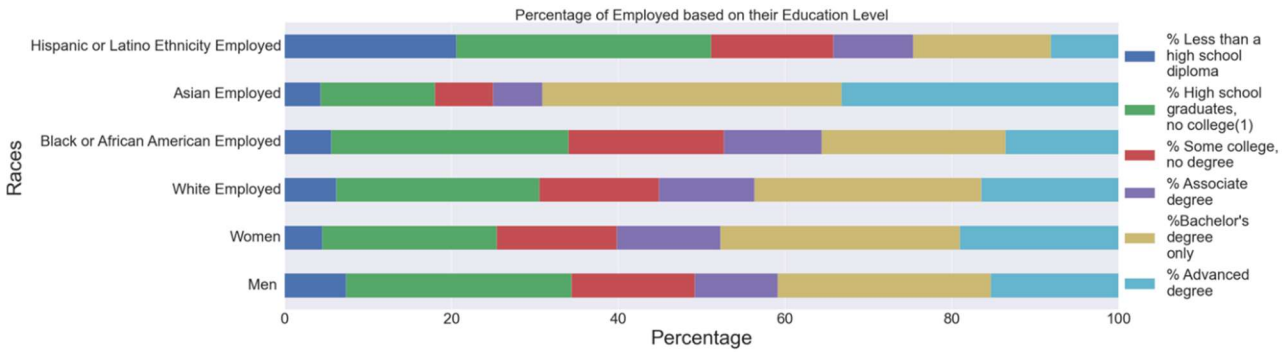
- https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-income-households.html
- https://www.bls.gov/cps/cpsaat07.htm

Methodology

- Libraries used:
  - i) NumPy- To replace Nan values with empty strings
  - ii) Panda- To read files, clean data, and calculate metrics
  - iii) Matplotlib- To visualize data with the help of charts
  - iv) Seaborn- To style, customize, and cite charts
- Excel reader was used to read the datasets
- There were several empty values across the rows and columns of all datasets. All the Nan Values were replaced by empty strings
- As the datasets were taken from government websites, there were no duplications in the data, but there was a lot of information that was irrelevant for the analysis. Therefore, the rows and columns not required were filtered using iloc indexing functions
- Few metrics were calculated by using pandas, like the unemployment rate, percentage changes between different years to extrapolate the impact pre and post-pandemic
- Stacked, vertical, and horizontal bar charts, line graphs were plotted for easy interpretation of the manipulated data and to demonstrate the patterns across years race-wise.
- Seaborn was used to customize the charts and to make it look more presentable.

Analysis

Employment status by Education Across races (Number in Thousands)



Interpretation

- 33 % of Asians who are employed have an advanced degree and 35% of them have bachelor's degree. These percentages are very low for Hispanic.
- It can be concluded that Majority of Hispanics and Black or African American who are employed are just high school graduates, while white and Asians, that are in labor force have mostly completed bachelor and advanced degrees.

Income Summary Measures by Selected Characteristics: (Showing Impact of COVID)

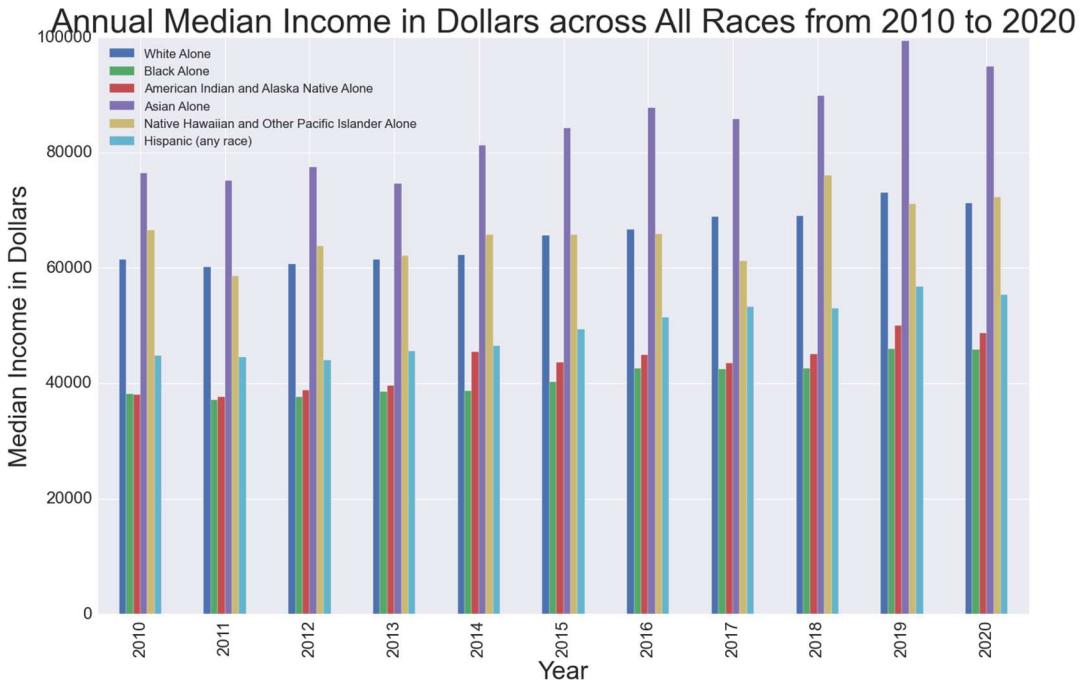
For this Analysis, Two Datasets are used as follows:

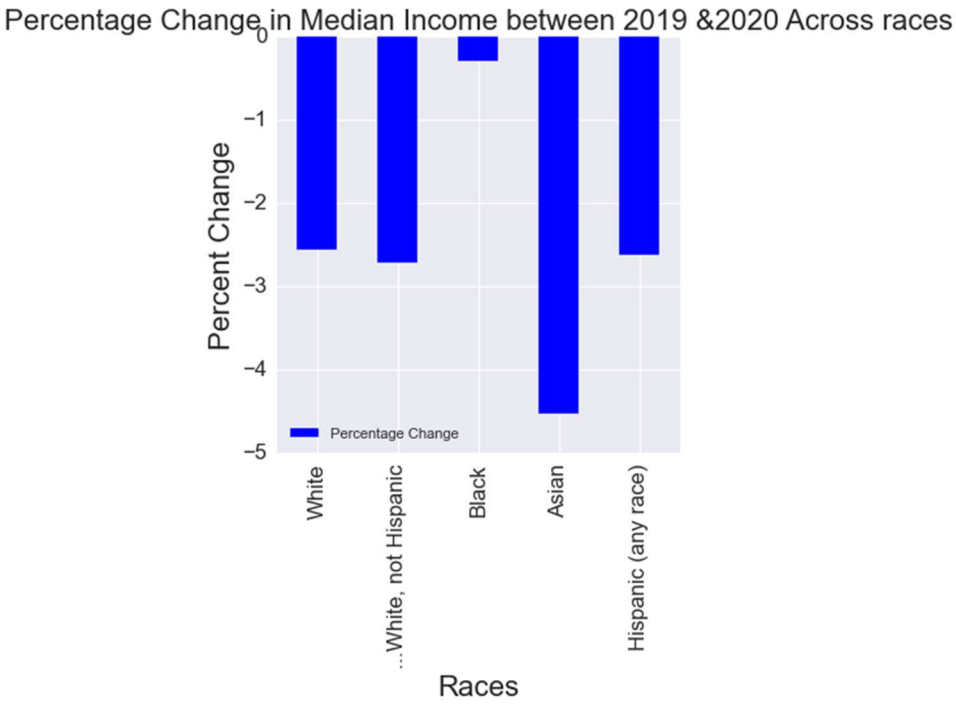
1. Household Mean Income Across All races from 2010 to 2020
2. Household Median Income from 2019 to 2020 with Race Description

Analyzing Annual Median Income Across All Races from 2010 to 2020

As seen from the graph , there was a steep decrease in 2020 that was the first statistically significant decline in mean household income since 2011.

Analysing the percentage change In Median Income from 2019 to 2020 amongst all races



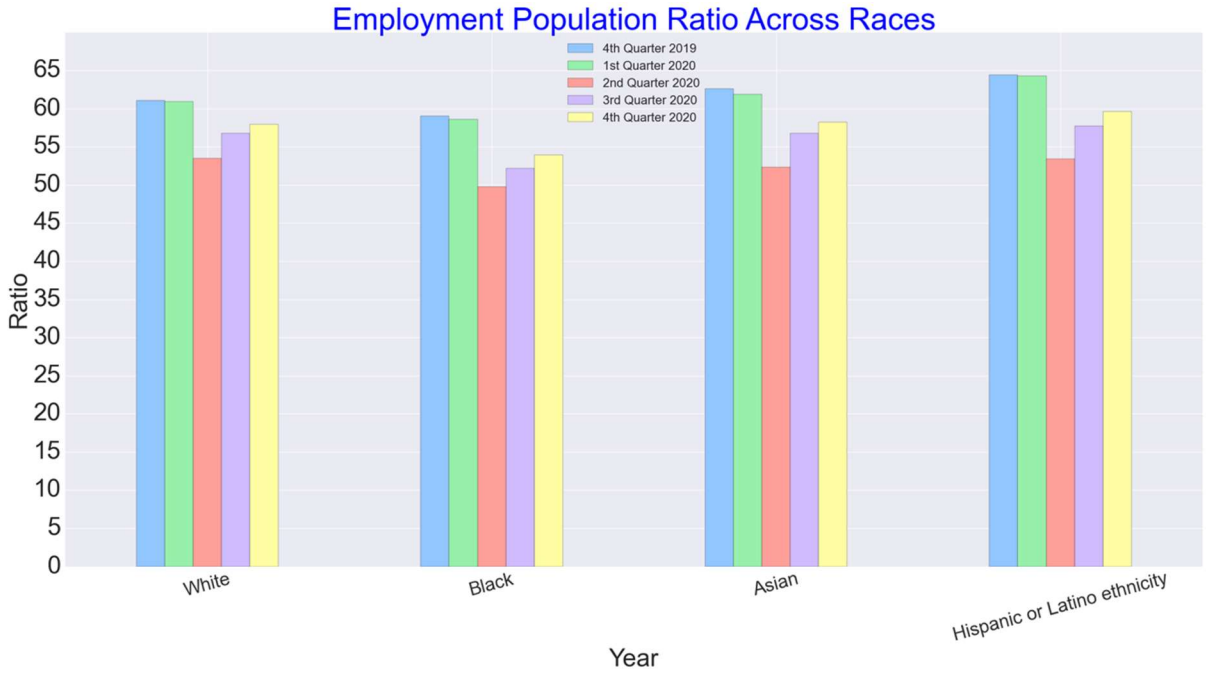


Interpretation:

From above two charts following can be concluded:

- Asians alone have the highest annual median income among all races over the span of 10 years followed by whites and other races
- In 2020 there was a steep decline of around 4500 dollars that comes to around a decline of 4.5% in the annual household median income for Asians while the pandemic did not impact much on the income of other races

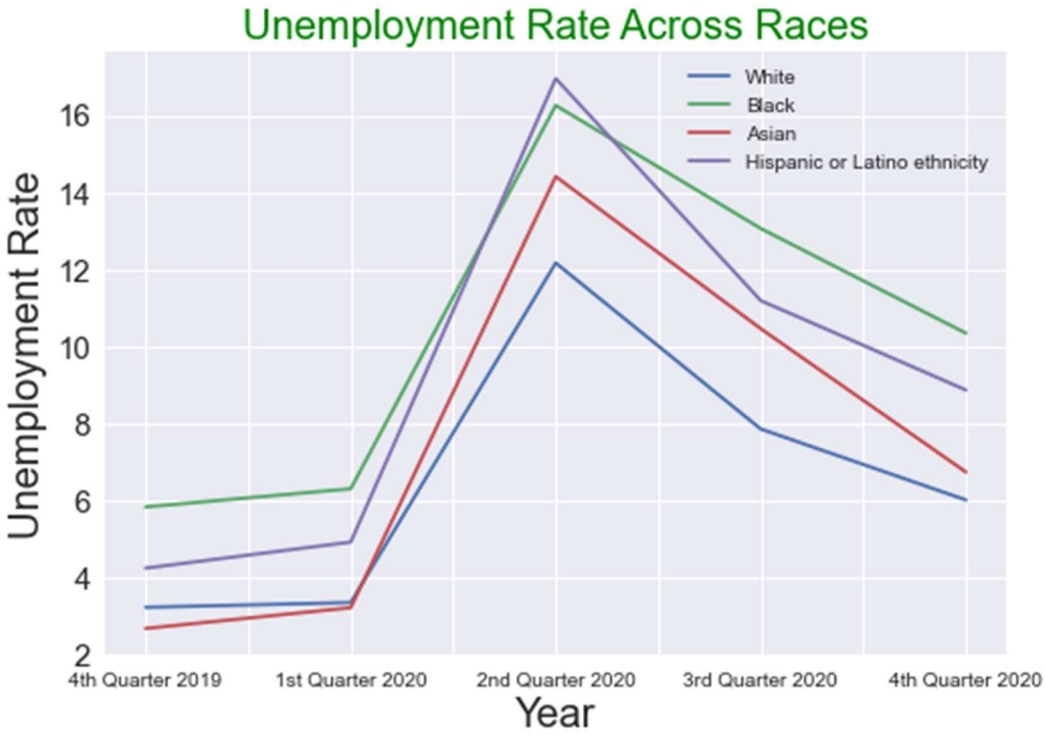
Analysing impact due to COVID 19 by Employment Population Ratios per quarter of 2020 and comparing ratios with 4th quarter 2020 vs 2019



Interpretation:

- In 2020, employment-population ratios fell down tremendously for all race groups, which is clearly evident from the declines in the ratios for across all races.
- There was an improvement in the second half of the year but it was trivial to make up for the fall that occurred in the second quarter of 2020
- If we compare the ratios of 4th quarters of 2020 with 4th quarter of 2019, it can be observed that some groups were affected more than others. The ratio for Whites declined by 3.2 percent over the year, to 57.9 percent, but the drop off in the employment–population ratios for Blacks, Hispanics, and Asians were highest
- The ratio for Blacks decreased to 53.9 percent in the fourth quarter of 2020, which was a loss of 5 percent approximately over the year
- The ratios for Hispanics or Latino Ethnicity and Asians fell sharply during 2020, with the ratio for Hispanics reducing by 4.8 percent to 59.6 percent, and the ratio for Asians reducing by 4.4 percent, to 58.2 percent

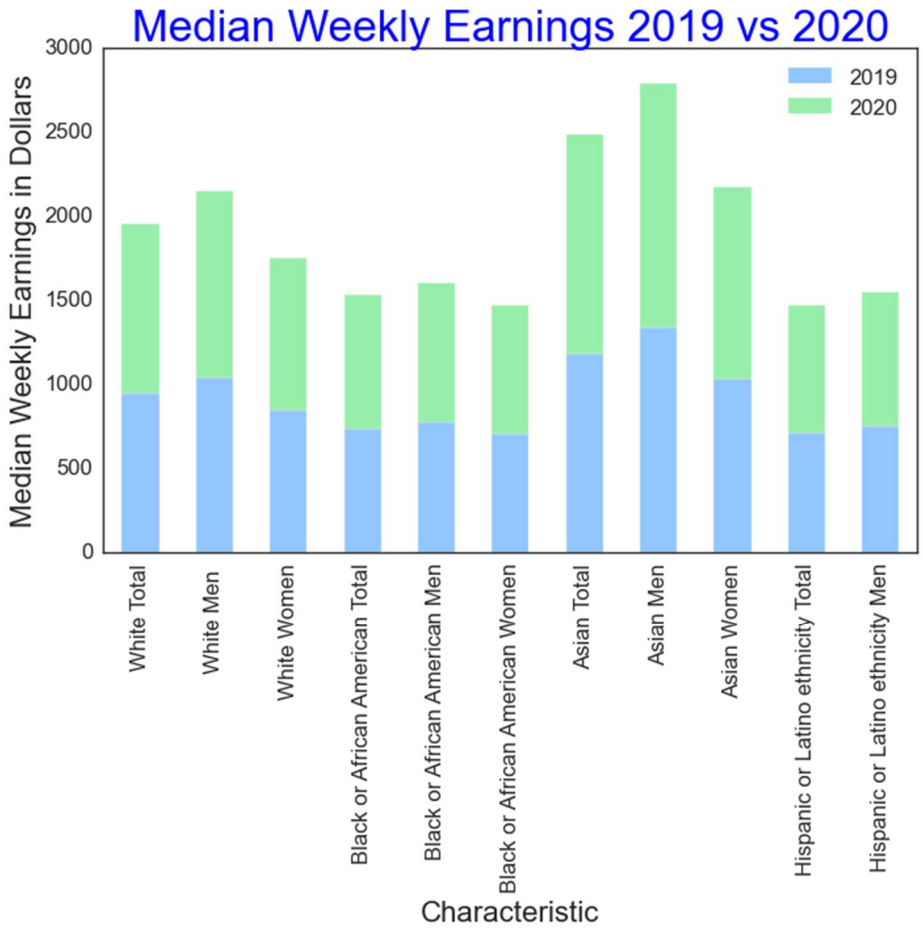
Analysing COVID Impact by deriving Unemployment Rate Across All Races per quarter of 2020 and comparing results of 4th quarter of 2020 from 2019 4th quarter

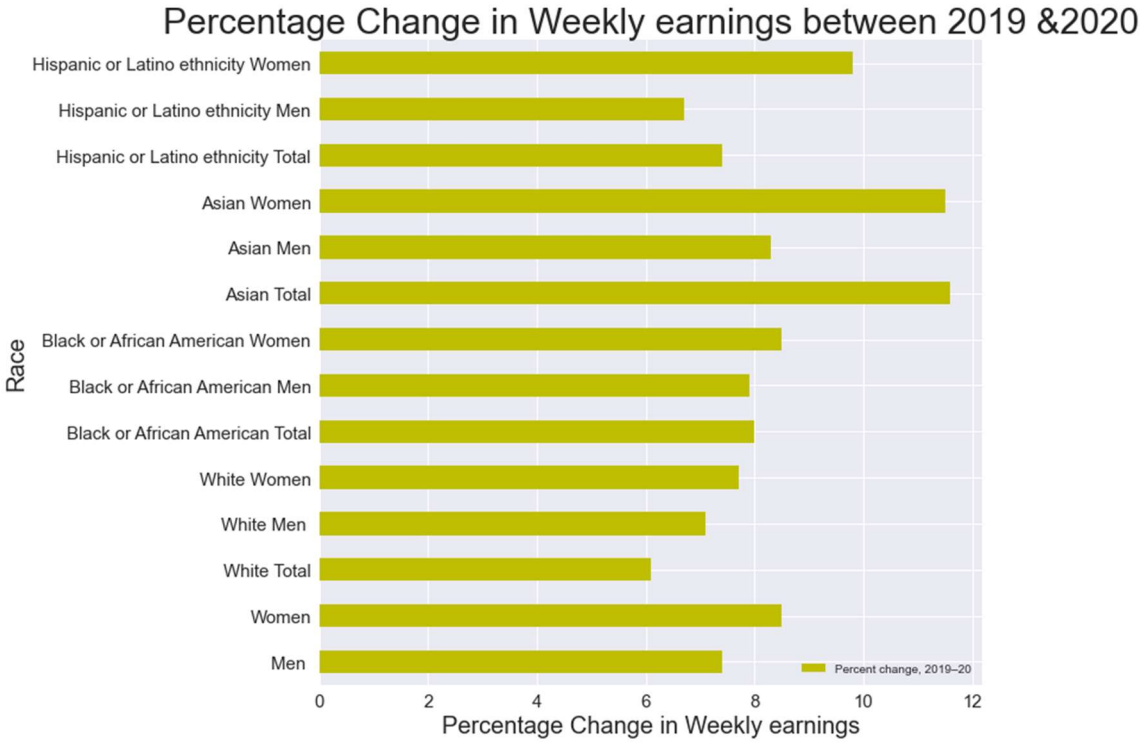


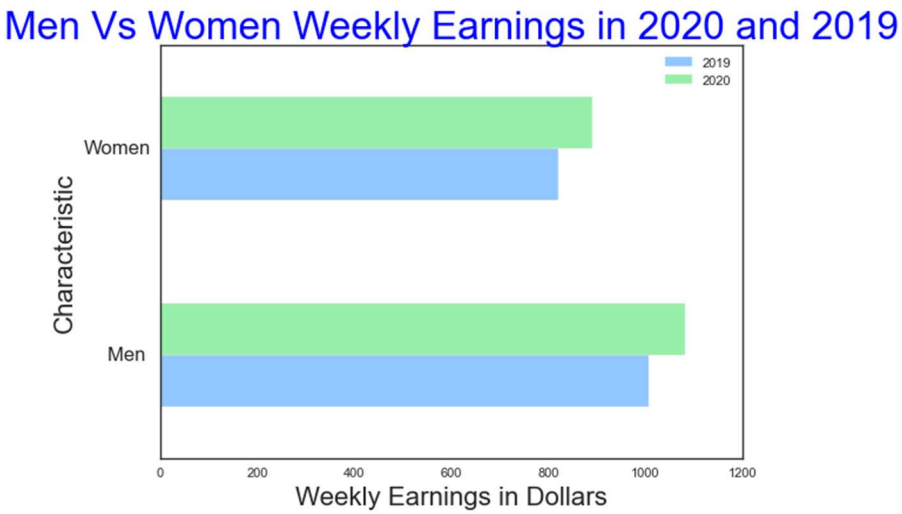
Interpretation:

- Across the major race groups, unemployment rates at the end of 2020 were way higher when compared to the fourth quarter of 2019.
- As evident from the chart, in 2nd quarter of 2020 unemployment rate have increased tremendously for all the races.
- The unemployment rate for Blacks, was at 10.3 percent in the fourth quarter of 2020, that has increased by 4.5 percentage points over the year.
- The jobless rate for Asians almost twice, increasing by 4 percentage points over the year, to 6.7 percent.
- The unemployment rate for Hispanics increased by 4.7 percentage points, to 8.9 percent. and there was a increase by 2.8 percent for whites over the year.
- Therefore it can be concluded that Blacks were affected the most followed by Hispanic and Asians.

Median usual weekly earnings annual averages, 2019–20 (in $) Across Races



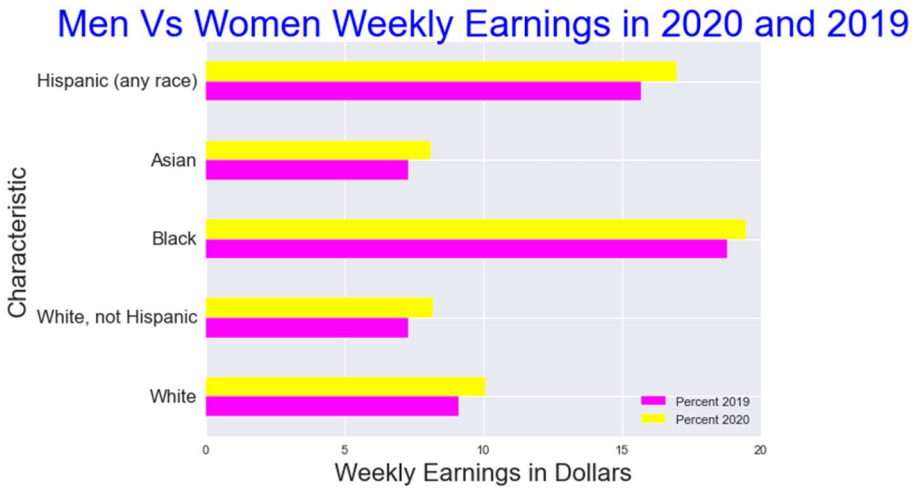




Interpretation:

- Median usual weekly earnings of full-time wage and salary workers was 984 dollars in 2020.
- Although pandemic-related job losses made it difficult to estimate the growth rate in earnings, the earnings profile in 2020 in terms of major demographic and other characteristics mirrored those of recent years.
- Women's median weekly earnings in 2020 were 891 dollars, or 82.3 % of men's weekly earnings (Men's Earnings were1,082 dollars)
- Hence, we can conclude that COVID did not impact the weekly earnings as such

Analysing People in Poverty Across All Races 2020 vs 2019



Interpretation:

- Between the two years, the poverty rate increased for non-Hispanic Whites and Hispanics.
- Amidst non-Hispanic Whites, 8.2 percent people were in poverty in 2020, while Hispanics had a poverty rate of 17.0 percent
- Across all racial groups, Blacks had the highest poverty rate of 19.5 percent, but this was not a major change from 2019. The poverty rate for Asians was 8.1 percent in 2020 which was again not much indifferent from 2019

From the above analysis, it can be summed up that the coronavirus outbreak had affected drastically many people in the United States, but definitely black and Hispanic Americans more affected than other races.

Impact of Covid on US Household Savings, Expenditure & Unemployment

Due to company delays and shutdowns prompted by social-distancing measures, the COVID-19 epidemic has created a tremendous economic shock over the world. We intended to investigate the socioeconomic impact of COVID-19 on individuals by looking at household savings, spending, and unemployment in the United States. The impact of indirect macroeconomic consequences, the role of uncertainty in household decision-making, and the possible effect of simultaneous exogenous shocks can all be explored further in this study.

Data Collection:

The data was collected from federal government agencies:

a) https://www.pandemicoversight.gov/data-interactive-tools/interactive-dashboards/coronavirus-relief-fund
b) https://data.oecd.org/hha/household-disposable-income.htm#indicator-chart
c) https://data.nasdaq.com/login?intendedUrl=%2Faccount%2Fprofile

Methodology

- For importing the datasets, we used the Nasdaq Data Link, which is a powerful, centralized, cloud-based technology platform providing access to more than 250 trusted data sets, available via API.
- We generated an account with Nasdaq and generated our unique API Key. Using the API key, we were able to load the data using the Quandl package.
- Considering the data is from Nasdaq and provided by verified collectors, there was not much cleaning required for the datasets. (Datasets used for exploring about the covid impact on US Household savings and expenditure)
- However, Covid Relief Fund dataset required a lot of data manipulation. The first step was to clean the datasets and perform sanity checks. Basic sanity checks were performed like removing the duplicate values, checking for any missing values, and calculating the total missing values from all the data frames.
- We have used iloc and loc functions for slicing and indexing the data frames to fetch the desired datasets and groupby for splitting the data into separate groups to perform computations for better analysis
- We have also plotted the graphs to understand the post/ pre covid scenarios for data such as the total US household savings and expenditure for graphical representation of data as they are very intuitive, and the reader can instantly grasp on to the results.
- Performing a market trend analysis for studying the impact of covid on corresponding changes in US household savings and expenditure.

Conclusions

We have done a detailed analysis on the impact of covid on corresponding changes in savings and investment pre/post covid time. The analysis is comprised of 3 parts: Savings, Expenditure, Unemployment.

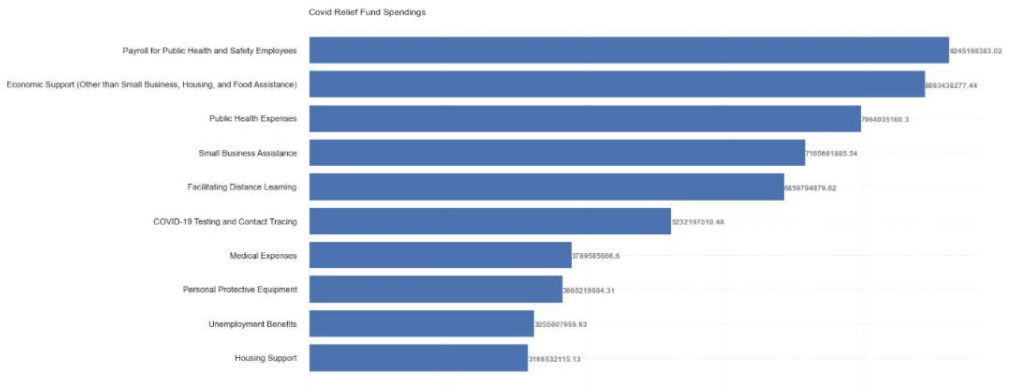
US Household Savings

- Personal savings, as defined by the Bureau of Economic Analysis, are funds left over after persons have spent their money and paid their taxes. During the COVID-19 pandemic, many homes were financially strained, unable to pay for essentials like as rent and groceries. It may come as a surprise, though, that total personal savings have increased since the pandemic began. **We can see from the graph that personal savings increased dramatically between the pre-covid period and January 2021.**

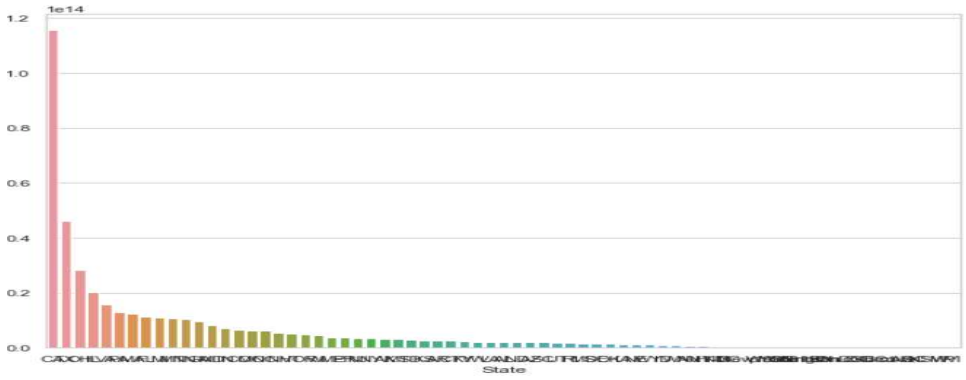
- There could be several factors for the rise in average savings:
  a) Households practicing precautionary saving during a downturn in the economy
  b) Inability to spend money due to business closures and social distancing guidelines
  c) Stimulus checks (or relief payments) were provided to a vast majority of households in the United States.

Many people used their stimulus checks to buy essentials or other goods and services. However, because of the broad nature of relief check/stimulus payment eligibility, several households that got payments didn't need or want to spend the extra disposable income right away; instead, they put it aside**. However, we are observing a progressive reduction in post-Covid savings, and it appears to be going back to the starting levels, implying that US households did not save much after the Covid period ended**.

Since one of the most important factors in increasing household savings was stimulus payments. As a result, we decided to look into the stimulus payments offered to the economy and US households throughout the pandemic. Stimulus payments were checks issued by the US government to taxpayers to increase their purchasing power and stimulate economic activity. Between March 2020 and March 2021, the US government provided three waves of stimulus funds to Americans to help them recover from the effects of COVID-19.



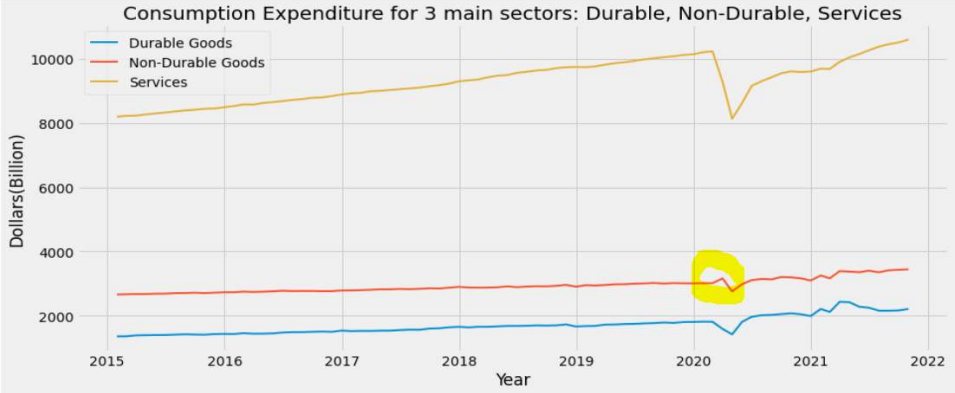
- The above graph shows the various categories in which the Stimulus Payments had been used by the general households. From the above analysis, we could figure out that Covid Relief Funds were majorly used for the public health and safety.



- We also dug further to learn more about the states that received the covid relief payments. We were able to deduce from our investigation that the state of California earned the largest payment for Covid relief. To resuscitate the economy, we utilized Python to determine the minimum, maximum, and mean amounts dispersed among US households and enterprises.

US Household Consumption Expenditure:

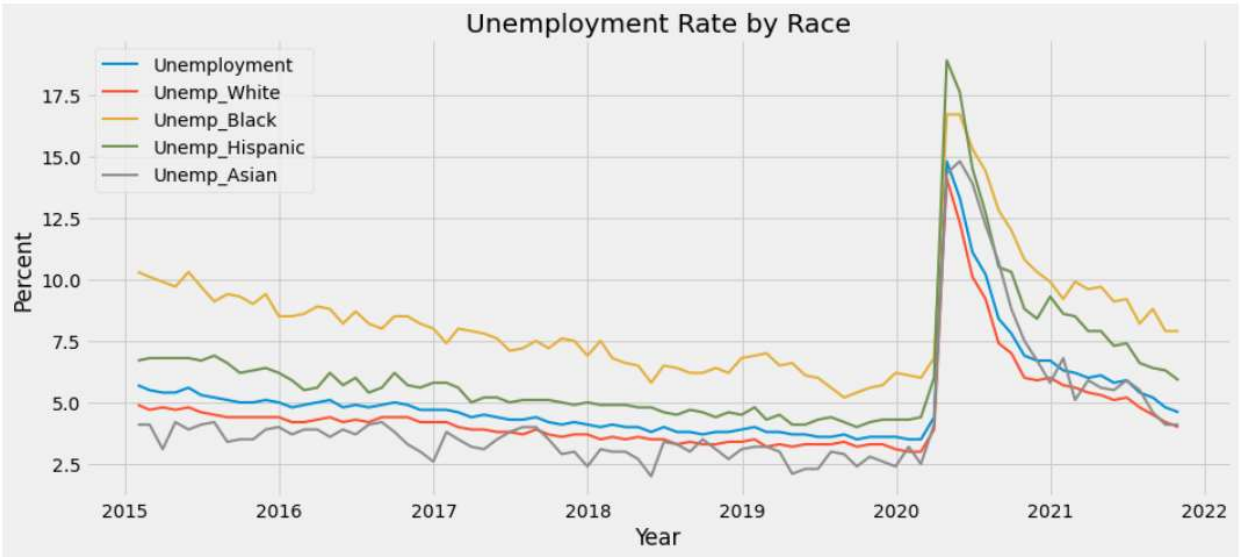
- In national income accounting, personal consumption expenditure is divided into three broad categories: expenditures for services, for durable goods, and for nondurable goods.



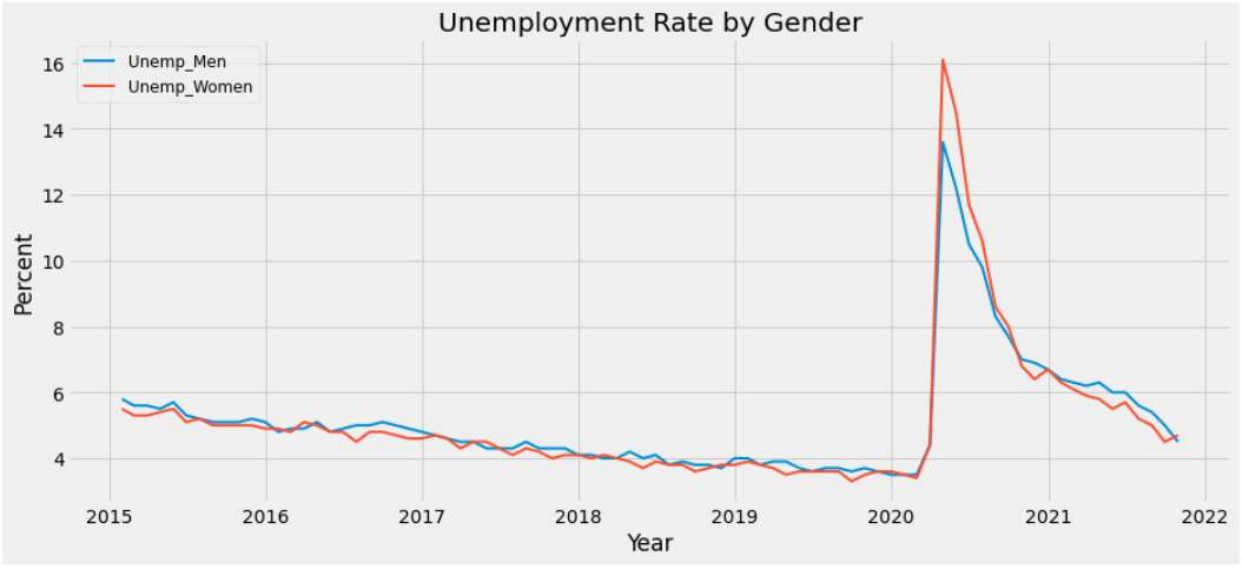
- Consumption expenditure rises rapidly in the early years of the pandemic, but there is a sharp reduction in all three sectors (durable goods, non-durable products, and services) at the commencement of the epidemic**. However, we see a spike in non-durable goods consumption during the first few months of the year 2020, when the pandemic begins (January – March 2020).** This occurred mostly as a result of people hoarding and amassing basic commodities such as food and beverages throughout the year in order to be prepared for possible emergencies or crises.
- Another key takeaway from the main graph is that throughout the pandemic, consumption expenditure for durable goods increased dramatically, leaving the other two sectors behind (non- durable, services).
- Several variables may have contributed to the surge in durable goods spending seen during the epidemic. Lockdowns and social distancing, which represent government, industry, and consumer safeguards in the face of COVID-19, may have shifted consumer demand away from services and toward durable products, resulting in an increase in durable goods spending. Many people spent more time than usual in and around their homes, caring for others, working or studying from home, producing at home, or engaging in leisure activities, lowering their consumption of services such as eating out or travelling.
- Another factor an increase in consumers' disposable income during the pandemic may have stimulated the consumption expenditure including durable goods.
- COVID-19's impact on consumer behavior will fade as public health worries fade and the economy reopens, allowing consumers to return to a more traditional mix of spending on durable goods, nondurable items, and services. Reduced fiscal stimulus will cause disposable income to return to its long-term trend, resulting in a slowdown in consumer expenditure on durable goods.

Unemployment:

The COVID-19 pandemic has had a significant effect on labor market metrics for every state, economic sector, and major demographic groups in the United States. Since so many people were affected due to the pandemic, we wanted to analyze the races and genders which were the most affected.



- Sharp increase in unemployment for all races during covid, however **hispanic** population had highest percentage of unemployment during the covid time. Post covid last month, Black population has the highest unemployed population while Asian/ White being the least.



- We can analyze from the graph that women were more affected than men during covid as we see a higher % of unemployment rate among women. Post covid (last month till Oct'21) the unemployment rate for both men and women are similar as in the earlier years.

Conclusion

The Coronavirus pandemic has had unprecedented and widespread effects on American households. The scope of the COVID-19 pandemic, as well as the global lockdown consequences, are still unknown. However, as events unfold, there has been a rapid fall in social connections, a looming global economic downturn, deaths, and a growing fear of the "unknown," all of which have resulted in a shift in the status quo. Furthermore, the COVID-19 pandemic has had far-reaching consequences around the world, including a significant strain on various countries' healthcare systems, deaths, and other diseases/health difficulties.

Apart from the COVID-19's health-related consequences, there are other covid-related repercussions that have impacted the world. In this report we focused on Impact of Covid on Household Finances Across Demographics and concluded the below findings from our analysis:

- Impact of Covid on household income:
  1. Due to covid, there was a 3 percent decrease in the household income from 2019 to 2020.
  2. The 2020 real median incomes of family households and nonfamily households decreased 3.2 percent and 3.1 percent from their respective 2019 estimates owing to the pandemic.
  3. Female family and non-family households were the only ones to demonstrate "increasing" income after covid, since the drop in full-time, year-round workers was concentrated among female workers with lower incomes and female workers in low-wage industries and occupations, which boosted earnings.

- Impact of Covid on existing wage-gap between men & women:
  1. Women continue to get paid less than men, across different levels of education. The average wage-gap stands at around 70% approximately, signifying that no matter the education level, a woman earns about 70% of what a man with the same educational qualification earns.
  2. Although there is a wage-gap between the two genders, it has been decreasing almost consistently.

- Impact on existing wage-gap across races:
  1. Blacks, Asians, and Hispanics were more adversely affected than Whites by the pandemic-induced recession. The unemployment rate for Blacks grew by 4.5 percentage points in the fourth quarter of 2020, to 10.3 percent.
  2. In 2020 there was a steep decline of around 4500 dollars that comes to around a decline of 4.5% in the annual household median income for Asians while the pandemic did not impact much on the income of other races.

- Impact of Covid on savings, expenditure, and unemployment:
  1. Aggregate personal savings showed a sudden increase at the start of the pandemic. There was a gradual decrease in savings post Covid.
  2. Personal consumption expenditure showed a decrease for all sectors i.e., durable goods, non-durable goods, and services. With time the demand for durable goods rose due to imposed lockdowns, business closures and social distancing guidelines since more people started spending leisure time at home.
  3. Unemployment rate increased due to loss of jobs during the pandemic.

Analyzing these socio- economic factors helped policymakers in getting a concrete picture of the current scenarios to frame policies better. For e.g.: Having understood the monetary implications the US Government distributed stimulus checks among taxpayers to increase their purchasing power and stimulate economic activity at the time of the pandemic which helped them to boost their savings and meet basic necessities.