Final Project: Statistical Analysis by State of How Nicaraguan Asylum claims vary by Key Factors

2023-12-13

I. Introduction and Nicaraguan Asylum Filings and Decisions Trends over the last 23 years

For this project, I have chosen to investigate the immigration patterns of Nicaraguans in the United States. The rationale behind my choice lies in the substantial increase in immigration from Latin America to the US over the past decade. Specifically, I have focused on Nicaragua due to the socio-political crisis triggered by protests against Daniel Ortega's authoritarian regime in 2018, which led to a significant rise in immigration to the US, with many seeking asylum.

As part of my analysis, I will initially examine the trends in asylum applications filed in each US state, along with the corresponding approval and denial rates. However, it's important to note that this data only reflects the relationship between asylum filings and decisions, providing a limited view of the overall immigration trend. To gain a more comprehensive understanding of why immigrants choose to settle in particular states, given their background as political asylum seekers fleeing a left-wing oppressive government and the current socio-economic and political conditions offered by each state, it is essential to incorporate additional variables into the analysis.

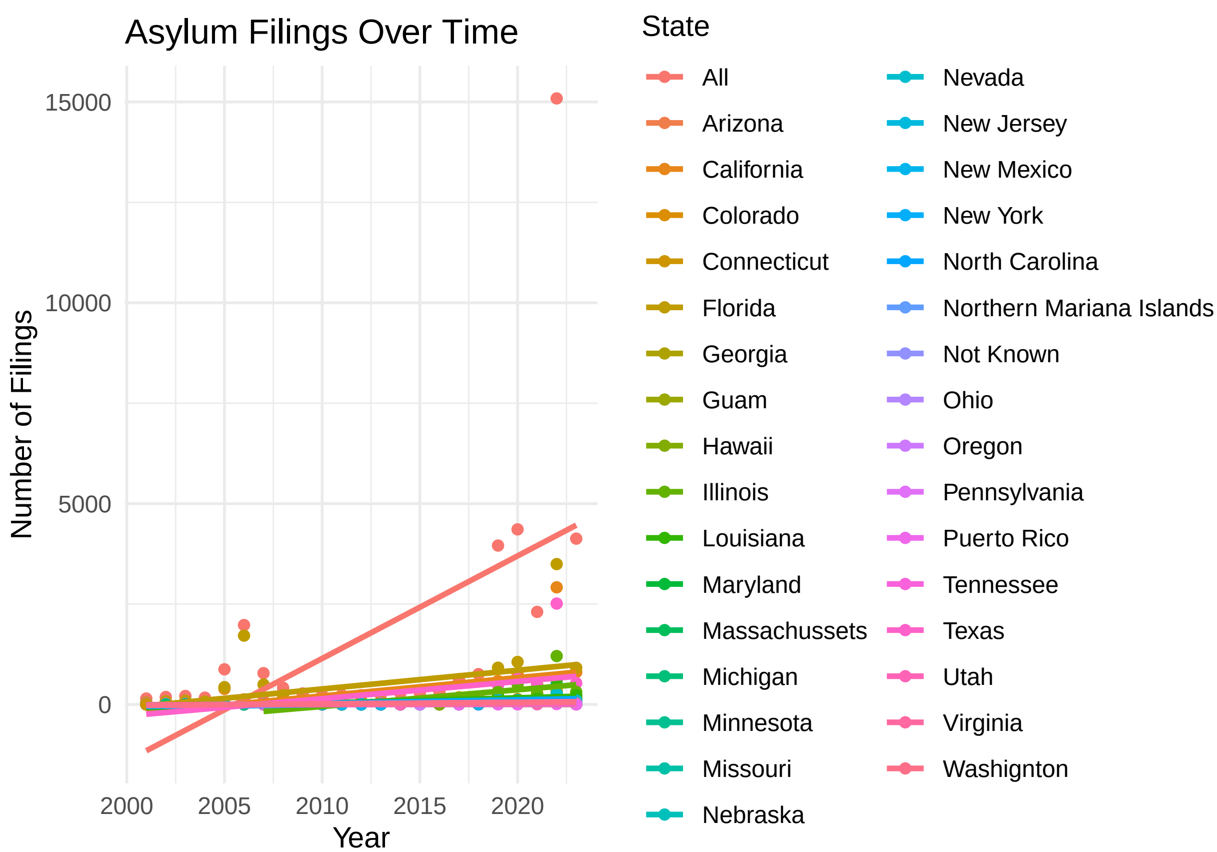
I hypothesize that factors such as the political affiliation of the state's governor, the percentage of Hispanic populations, and the state's GDP per capita have a significant influence on the trends in asylum applications and decisions among Nicaraguan migrants in the United States post-2018. Specifically, states with a higher proportion of Hispanic populations, governed by parties more supportive of immigration, and with a higher GDP per capita, may experience higher rates of asylum applications and approvals for Nicaraguan migrants.

This study is of particular interest as immigration rates have been on the rise in recent years, and it can provide valuable insights into immigration trends and the decision-making processes of immigrants, taking into account their backgrounds and the conditions offered by each state. This analysis may also contribute to predicting the future implications of these new populations settling in various states.

```r
# Graph 1- asylum filings

library(ggplot2)
library(tidyr)

# Loading the data
filings <- read.csv("asylum_filings.csv")



# Converting all year columns to numeric values
year_cols <- grep("^X[0-9]{4}$", names(filings))
filings[, year_cols] <- lapply(filings[, year_cols], function(x) as.numeric(gsub("[^0-9.]", "", x)))

# Reshaping the data to a longer format
asylum_long <- tidyr::pivot_longer(filings,
                                   cols = starts_with("X"),
```

```r
                                    names_to = "Year",
                                    values_to = "Filings")

# Convert the Year from 'XYYYY' to 'YYYY' format
asylum_long$Year <- as.numeric(sub("X", "", asylum_long$Year))

# Plot
ggplot(asylum_long, aes(x = Year, y = Filings, color = State)) +
  geom_point() +
  geom_smooth(method = "lm", se = FALSE) +
  theme_minimal() +
  labs(title = "Asylum Filings Over Time",
       x = "Year",
       y = "Number of Filings")
```

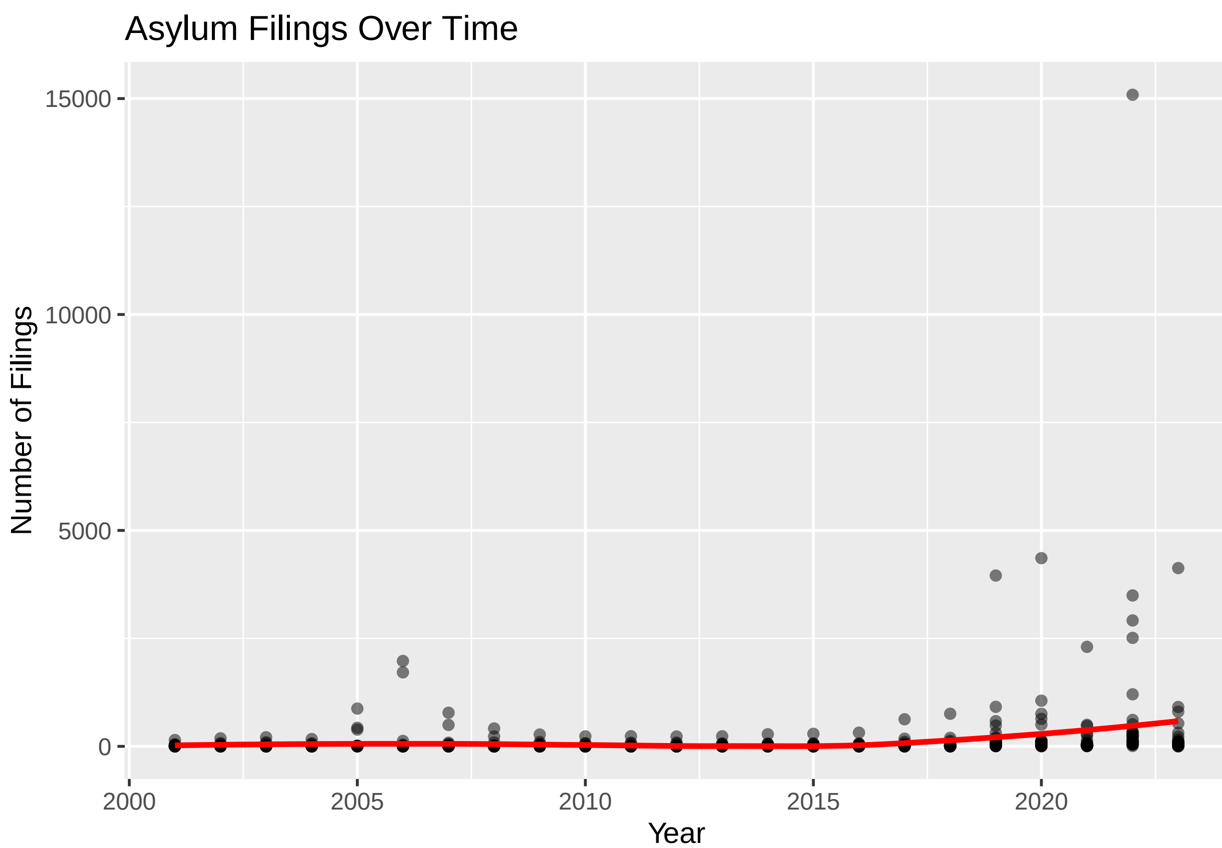
```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 211 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 211 rows containing missing values (`geom_point()`).
```




```r
#graph 2 - asylum filings without the labels
filings <- read.csv("asylum_filings.csv")
```

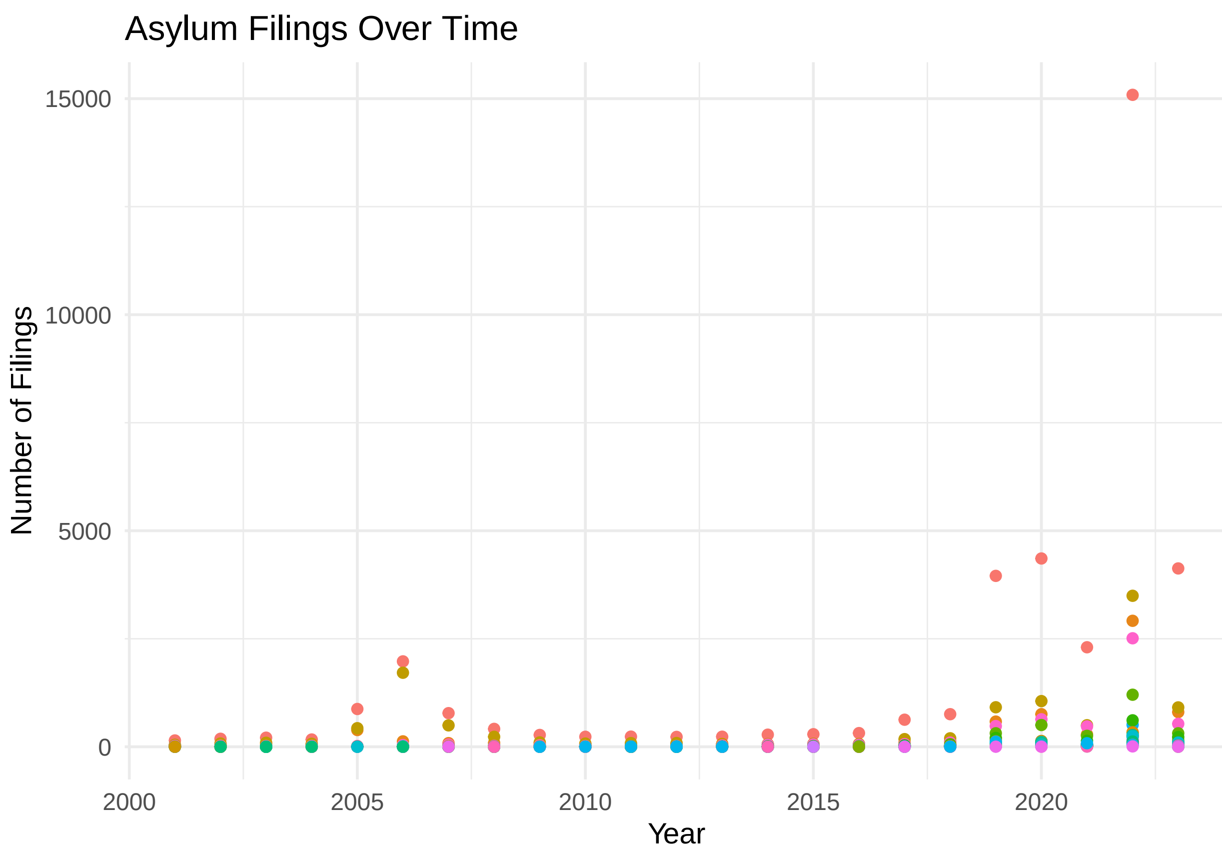
```r
# Converting all years to numeric values
year_cols <- grep("^X[0-9]{4}$", names(filings))
filings[, year_cols] <- lapply(filings[, year_cols], function(x) as.numeric(gsub("[^0-9.]", "", x)))

# Reshaping the data to a longer format
asylum_long <- tidyr::pivot_longer(filings,
                                   cols = starts_with("X"),
                                   names_to = "Year",
                                   values_to = "Filings")

# Converting the Year from 'XYYYY' to 'YYYY' format
asylum_long$Year <- as.numeric(sub("X", "", asylum_long$Year))


# visualization
ggplot(asylum_long, aes(x = Year, y = Filings)) +
  geom_point(alpha = 0.5, color = "black") +
  geom_smooth(method = "loess", se = FALSE, color = "red") +
  labs(title = "Asylum Filings Over Time",
       x = "Year",
       y = "Number of Filings") +
  theme(legend.position = "none")
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 211 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 211 rows containing missing values (`geom_point()`).
```




```
# graph 3- colored asylum filings over the years
library(ggplot2)
library(tidyr)

# Reshaping the data to a longer format
asylum_long <- tidyr::pivot_longer(filings,
                                   cols = starts_with("X"),
                                   names_to = "Year",
                                   values_to = "Filings")

# Converting the Year from 'XYYYY' to 'YYYY' format
asylum_long$Year <- as.numeric(sub("X", "", asylum_long$Year))

#visualization
ggplot(asylum_long, aes(x = Year, y = Filings, color = State)) +
  geom_point() +
  theme_minimal() +
  labs(title = "Asylum Filings Over Time",
       x = "Year",
       y = "Number of Filings") +
  theme(legend.position = "none")
```

```
## Warning: Removed 211 rows containing missing values (`geom_point()`).
```



Part 1.2 Merged filings and approved asylums

```
#loading libraries
library(ggplot2)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(ggplot2)
library(dplyr)
library(tidyr)

#loading files

filings <- read.csv("asylum_filings.csv")
```

```r
decisions_denied <- read.csv("decisions_denied.csv")


library(ggplot2)
library(dplyr)
library(tidyr)

library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v forcats   1.0.0     v readr     2.1.4
## v lubridate 1.9.2     v stringr   1.5.0
## v purrr     1.0.2     v tibble    3.2.1
```

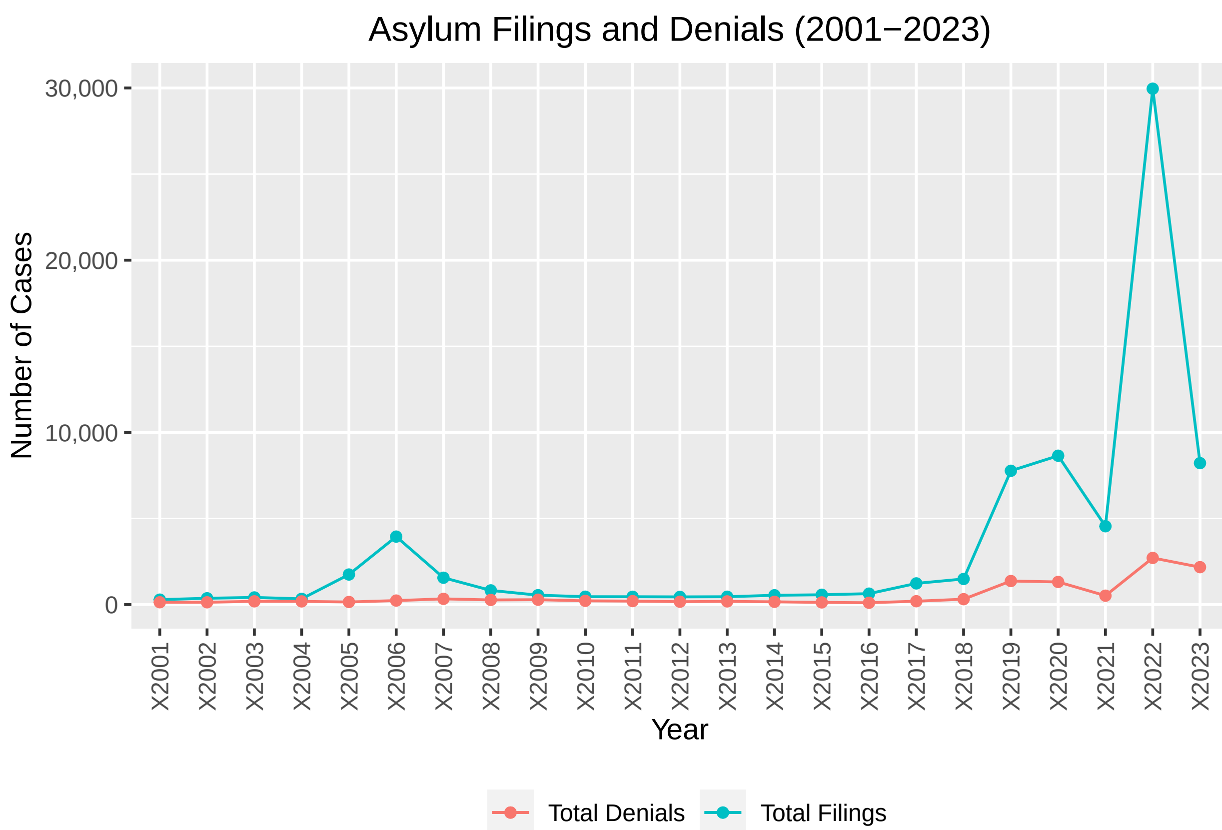
```
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```r
# Data cleaning and preparation/ adjusting column selection as per your dataset's structure/ excluding
filings_cleaned <- filings |>
    select(-State, -matches("All|Never|Detained|Released")) |>
    gather(key = "Year", value = "Filings") |>
    group_by(Year) |>
    summarize(TotalFilings = sum(as.numeric(gsub(",", "", Filings)), na.rm = TRUE))
```

```
## Warning: There was 1 warning in `summarize()`.
## i In argument: `TotalFilings = sum(as.numeric(gsub(",", "", Filings)), na.rm =
##   TRUE)`.
## i In group 18: `Year = "X2018"`.
## Caused by warning:
## ! NAs introduced by coercion
```

```r
denials_cleaned <- decisions_denied |>
    select(-State) |>
    gather(key = "Year", value = "Denials") |>
    group_by(Year) |>
    summarize(TotalDenials = sum(as.numeric(gsub(",", "", Denials)), na.rm = TRUE))

# Merging data
merged_data <- merge(filings_cleaned, denials_cleaned, by = "Year")



#visualizations
ggplot(merged_data, aes(x = Year)) +
    geom_line(aes(y = TotalFilings, group = 1, color = "Total Filings")) +
    geom_line(aes(y = TotalDenials, group = 1, color = "Total Denials")) +
  geom_point(aes(y = TotalFilings, group = 1, color = "Total Filings")) +
    geom_point(aes(y = TotalDenials, group = 1, color = "Total Denials")) +
    scale_x_discrete(breaks = merged_data$Year) +
```

```r
    scale_y_continuous(labels = scales::comma) +
    labs(title = "Asylum Filings and Denials (2001-2023)",
         x = "Year",
         y = "Number of Cases",
         color = "Legend") +
  theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
        legend.title = element_blank(),
        plot.title = element_text(hjust = 0.5),
        legend.position = "bottom")
```

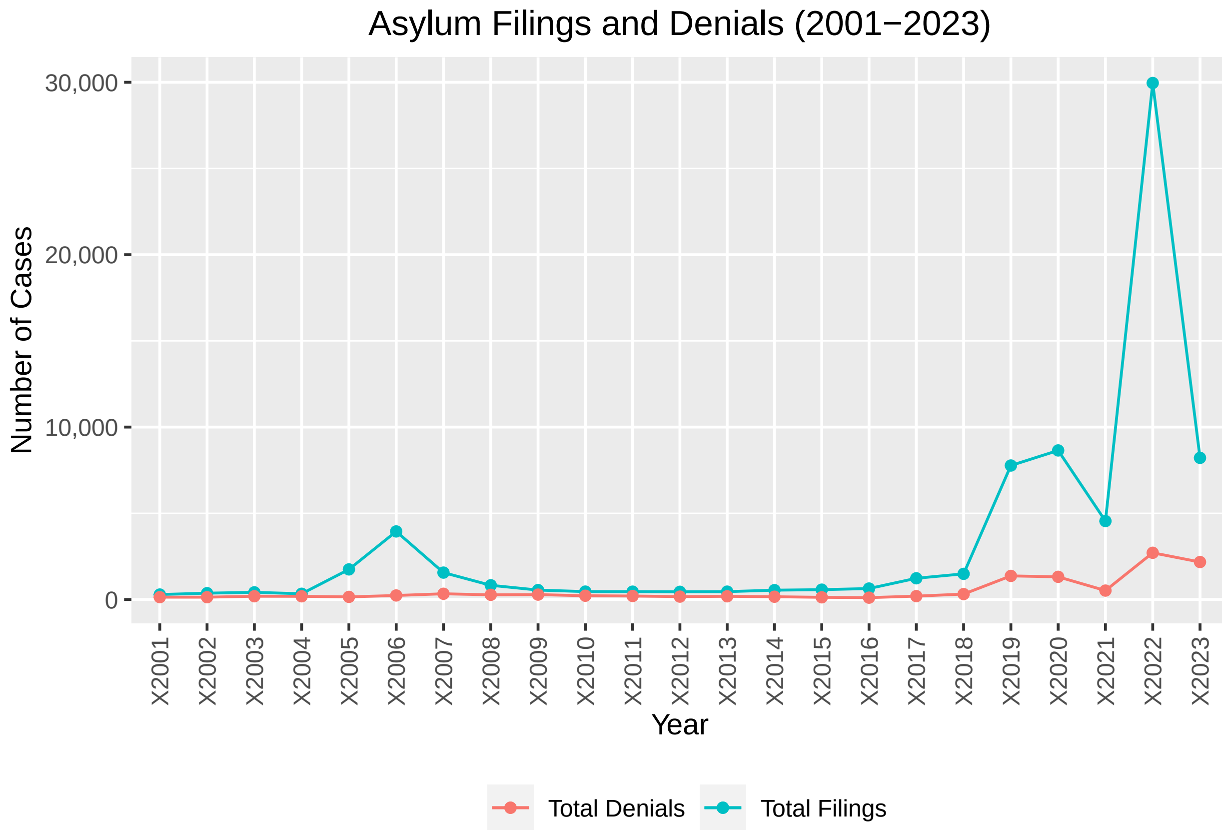



```r
#Part 1.3 Asylum filings and denials
##loading libraries
library(ggplot2)
library(dplyr)

library(ggplot2)
library(dplyr)
library(tidyr)

#loading data
filings <- read.csv("asylum_filings.csv")


decisions_denied <- read.csv("decisions_denied.csv")
```

```r
library(ggplot2)
library(dplyr)
library(tidyr)

library(tidyverse)

# Data cleaning and preparation/ adjusting column selection as per your dataset's structure/ excluding
filings_cleaned <- filings |>
    select(-State, -matches("All|Never|Detained|Released")) |>
    gather(key = "Year", value = "Filings") |>
    group_by(Year) |>
    summarize(TotalFilings = sum(as.numeric(gsub(",", "", Filings)), na.rm = TRUE))
```

```
## Warning: There was 1 warning in `summarize()`.
## i In argument: `TotalFilings = sum(as.numeric(gsub(",", "", Filings)), na.rm =
##   TRUE)`.
## i In group 18: `Year = "X2018"`.
## Caused by warning:
## ! NAs introduced by coercion
```

```r
denials_cleaned <- decisions_denied |>
    select(-State) |>
    gather(key = "Year", value = "Denials") |>
    group_by(Year) |>
    summarize(TotalDenials = sum(as.numeric(gsub(",", "", Denials)), na.rm = TRUE))

# Merging data
merged_data <- merge(filings_cleaned, denials_cleaned, by = "Year")


# making "year" as a factor
merged_data$Year <- factor(merged_data$Year)

# visualization
ggplot(merged_data, aes(x = Year)) +
    geom_line(aes(y = TotalFilings, group = 1, color = "Total Filings")) +
    geom_line(aes(y = TotalDenials, group = 1, color = "Total Denials")) +
    geom_point(aes(y = TotalFilings, group = 1, color = "Total Filings")) +
    geom_point(aes(y = TotalDenials, group = 1, color = "Total Denials")) +
    scale_x_discrete(breaks = unique(merged_data$Year)) +
    scale_y_continuous(labels = scales::comma) +
    labs(title = "Asylum Filings and Denials (2001-2023)",
         x = "Year",
         y = "Number of Cases",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          legend.title = element_blank(),
          plot.title = element_text(hjust = 0.5),
          legend.position = "bottom")
```



II. Data Section

For this project, my dependent variable consists of asylum filings spanning from 2001 to 2023, while the independent variables encompass approved decisions per state from 2001 to 2020, denied decisions per state in 2020, GDP per state from 2001 to 2020, the political party affiliation of each state's governor from 2001 to 2020, and the Hispanic population in each state from 2001 to 2020.

My decision to focus on asylum filings in each state, as opposed to the number of Nicaraguan immigrants, is motivated by two key factors. Firstly, asylum filings are meticulously recorded through official channels, providing a more reliable data source, whereas estimating the number of immigrants who enter through illegal means can be challenging. Secondly, asylum filings represent individuals who have a legal basis for seeking entry into the US, typically stemming from past experiences of persecution. Consequently, these filings indicate the number of individuals who may become part of the society through a legal process. This specific group, with their history of persecution, can potentially can be influenced by their political preferences and the opportunities they seek, which, in turn, may impact their choice of settling in particular states.

I opted to utilize asylum filings as my primary independent variable, rather than approved or denied decisions, because the approval or denial of asylum claims does not inherently illustrate immigration trends. Such decisions are often contingent on judicial discretion rather than the variables under examination. Although it is conceivable that judges may align with certain views influenced by a state's immigration policies, this aspect is beyond the scope of this study and would require additional variables to explore comprehensively.

This data was provided to me by Manuel Orozco, Director of the Migration, Remittances, and Development program at the Inter-American Dialogue. Initially, the data was not structured in tabular format but was accessible through an interactive website called Trac-Immigration, which provides government records of asylum filings and decisions for all countries over the past 23 years. With Manuel's support, I manually extracted data for Nicaragua, recording filings, approvals, and denials for the last 23 years.

For the remaining variables, spanning from 2001 to 2020, I sourced data because I could not obtain data for the most recent three years. In order to conduct regression analyses, I had to standardize the data, limiting it to the same time frame and consistent states. I obtained information on the political affiliation of each state's governor from the Institute for Social Research at Michigan State University. GDP data for the last 20 years was obtained from the Statista database. Lastly, the Hispanic population data for each state was acquired from the United States Census Bureau. However, due to the decennial nature of the census, I needed to manipulate the data to ensure all the requisite variables were available for the regression analysis using a linear fit. In other words, I made the assumption that the hispanic population would grow at a linear rate between each 10 year datapoint from the US census.

This research is a longitudinal study, as it explores data across a 20-year period. It's distinct from a cross-sectional study, which collects data at a single moment or within a brief timeframe. Cross-sectional studies offer a snapshot of particular variables at a specific point, enabling analysis and comparison at that moment. In contrast, longitudinal studies track changes in trends and behaviors over time. The focus of this study is on examining how these variables change and impact the dependent variable over various time intervals.

```
#packages and data
library(tidyverse)
library(png)
```

Descrip	tion
`filings` <- Number o	f asylum filings based on
`hispop` <- Hispanic	population based on the state 2001-2020
`GDP`<- GPD per capit	a for every state in the asylum filling data between 2001-2020
`Gov` <- Govnernor pa	rty affiliation from every state and their party affiliation bet
`approve` <-Number of	asylum filing approved by state from 2001-2020
`denied` <-Number of	asylum filing denied by state from 2001-2020

```
#manually filtered data for regressions
hispop <- read.csv("hispop_reg.csv")
filings <-read.csv("filings_reg.csv")
GDP <- read.csv("GDP_reg.csv")
Gov <- read.csv("Gov_reg.csv")
approve <- read.csv("approved_reg.csv")
denied <- read.csv("denied_reg.csv")
```

```
#Gov filter

#republican are now set to -1 and democrats are set to 1 had to use some sort of four loop to do this


for (governor in seq_along(Gov)) {
  Gov[[governor]] <- gsub(".*Democra.*", "1", Gov[[governor]])
  Gov[[governor]] <- gsub(".*Republican.*", "-1", Gov[[governor]])
  Gov[[governor]] <- gsub(".*New Progressive Party.*", NA, Gov[[governor]])
  Gov[[governor]] <- gsub(".*Independence Party.*", NA, Gov[[governor]])
  Gov[[governor]] <- gsub(".*N/A.*", NA, Gov[[governor]])
}
```

```r
library(broom)
library(patchwork)
library(ggplot2)
library(tidyr)
library(png)
library(knitr)

states <- c("California", "New.York", "Florida", "Texas", "New.Jersey",
            "Massachusetts", "Virginia", "Illinois", "Maryland", "Washington",
            "Georgia", "Pennsylvania", "Tennessee", "Louisiana", "Arizona",
            "Ohio", "Nebraska", "Colorado", "North.Carolina", "Minnesota",
            "Nevada", "Missouri", "Connecticut", "Oregon", "Michigan",
            "Utah", "Hawaii", "New.Mexico")

 states
```

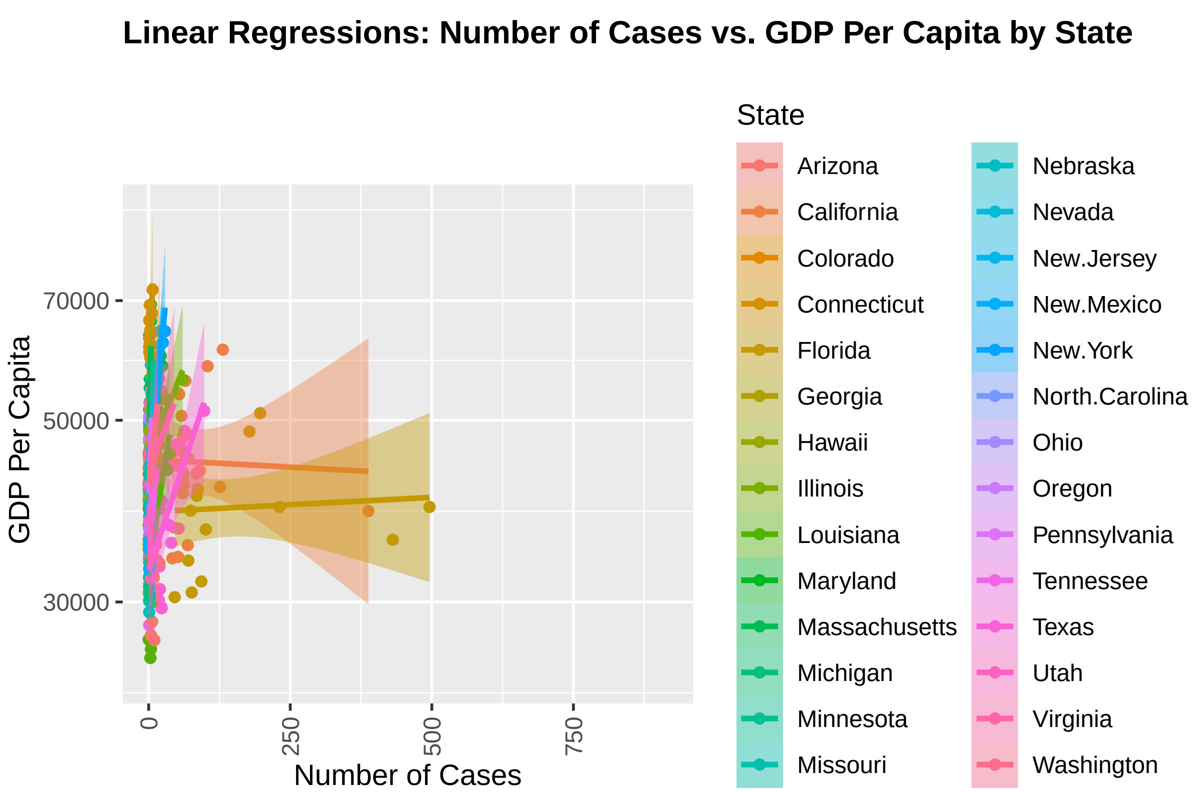
```
##  [1] "California"     "New.York"       "Florida"        "Texas"
##  [5] "New.Jersey"     "Massachusetts"  "Virginia"       "Illinois"
##  [9] "Maryland"       "Washington"     "Georgia"        "Pennsylvania"
## [13] "Tennessee"      "Louisiana"      "Arizona"        "Ohio"
## [17] "Nebraska"       "Colorado"       "North.Carolina" "Minnesota"
## [21] "Nevada"         "Missouri"       "Connecticut"    "Oregon"
## [25] "Michigan"       "Utah"           "Hawaii"         "New.Mexico"
```

```r
state_data_frames <- list()

for(state in states) {

    state_filings <- as.numeric(filings[[state]])
    state_GDP <- as.numeric(GDP[[state]])
    state_Gov <- as.numeric(Gov[[state]])
    state_denied <- as.numeric(denied[[state]])
    state_approve <- as.numeric(approve[[state]])
    state_hispop <- as.numeric(gsub(",", "", hispop[[state]]))



  state_data <- data.frame(

        Filings = state_filings,
        GDP = state_GDP,
        Gov = state_Gov,
        Denied = state_denied,
        Approved = state_approve,
        HispanicPopulation = state_hispop
    )

    state_data_frames[[state]] <- state_data
}
```

```
## Warning: NAs introduced by coercion
```

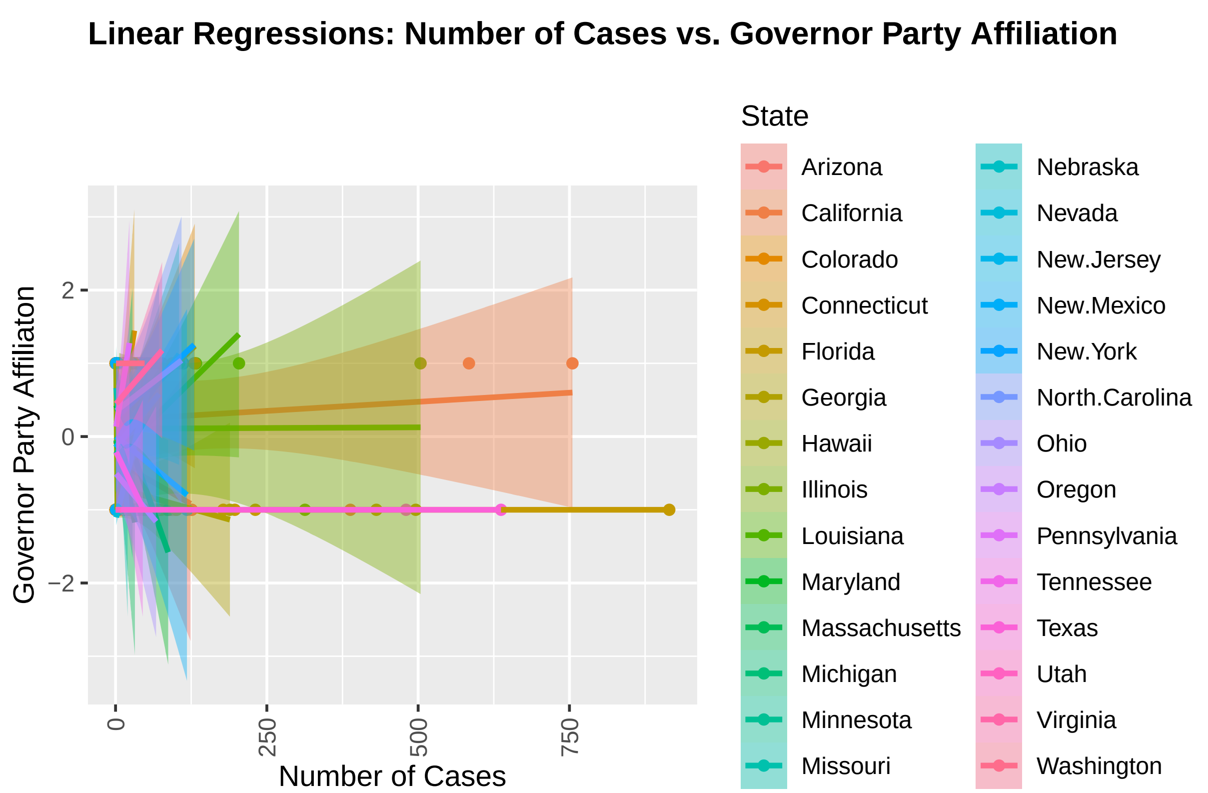
```r
combined_data <- bind_rows(state_data_frames, .id = "State")
text_size = 12
#GDP
ggplot(data = combined_data, aes(x = Filings, y = GDP, color = State, fill = State)) +
  geom_point() +
  scale_y_log10()  +
  geom_smooth(method = "lm", se = TRUE) +
  labs(title = "Linear Regressions: Number of Cases vs. GDP Per Capita by State",
       x = "Number of Cases",
       y = " GDP Per Capita") +
    theme(plot.margin = margin(t = 70, r = 10, b = 10, l = 10, unit = "pt"),
    axis.text.x = element_text(angle = 90, hjust=1, vjust = .5),
    plot.title = element_text(hjust = 0, vjust = 18, face = "bold", size = text_size)
  )
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 177 rows containing non-finite values (`stat_smooth()`).

## Warning in qt((1 - level)/2, df): NaNs produced

## Warning: Removed 177 rows containing missing values (`geom_point()`).

## Warning in max(ids, na.rm = TRUE): no non-missing arguments to max; returning
## -Inf
```



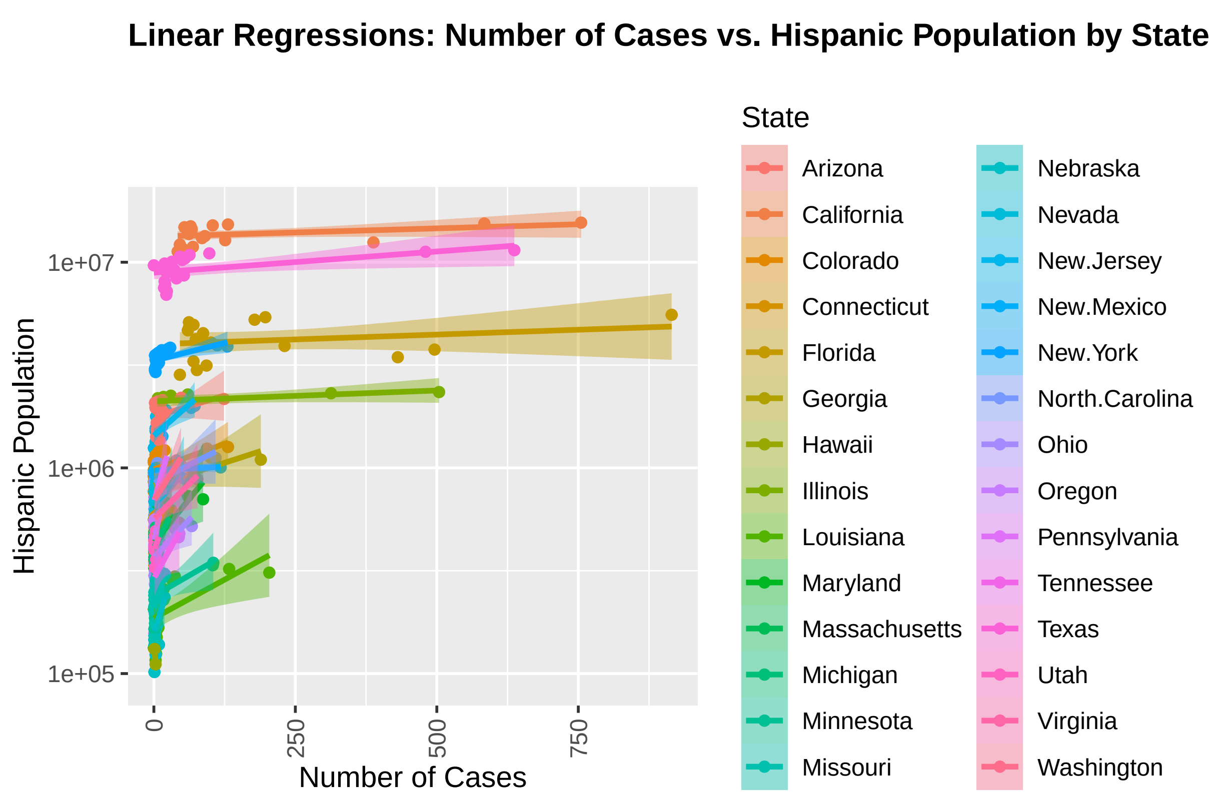
```r
#Gov
ggplot(data = combined_data, aes(x = Filings, y = Gov, color = State, fill = State)) +
  geom_point() +
  geom_smooth(method = "lm", se = TRUE) +
 labs(title = "Linear Regressions: Number of Cases vs. Governor Party Affiliation",
        x = "Number of Cases",
        y = "Governor Party Affiliaton") +
   theme(plot.margin = margin(t = 70, r = 10, b = 10, l = 10, unit = "pt"),
    axis.text.x = element_text(angle = 90, hjust=1, vjust = .5),
    plot.title = element_text(hjust = 0, vjust = 18, face = "bold", size = text_size)
  )
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 127 rows containing non-finite values (`stat_smooth()`).

## Warning in qt((1 - level)/2, df): NaNs produced

## Warning: Removed 127 rows containing missing values (`geom_point()`).

## Warning in max(ids, na.rm = TRUE): no non-missing arguments to max; returning
## -Inf
```



```r
#Hispop
ggplot(data = combined_data, aes(x = Filings, y = HispanicPopulation, color = State, fill = State)) +
  geom_point() +
  geom_smooth(method = "lm", se = TRUE) +
  scale_y_log10() +    # Logarithmic scale for y-axis+
  labs(title = "Linear Regressions: Number of Cases vs. Hispanic Population by State",
         x = "Number of Cases",
         y = "Hispanic Population") +
   theme(plot.margin = margin(t = 70, r = 10, b = 10, l = 10, unit = "pt"),
    axis.text.x = element_text(angle = 90, hjust=1, vjust = .5),
    plot.title = element_text(hjust = 0, vjust = 18, face = "bold", size = text_size)
  )
```

```
## 'geom_smooth()' using formula = 'y ~ x'

## Warning: Removed 124 rows containing non-finite values ('stat_smooth()').

## Warning in qt((1 - level)/2, df): NaNs produced

## Warning: Removed 124 rows containing missing values ('geom_point()').

## Warning in max(ids, na.rm = TRUE): no non-missing arguments to max; returning
## -Inf
```



```r
#Mulitple regression sumary information for each state
regression_summaries <- list()

for(i in states) {
  state_data <- subset(combined_data, State == i)

  models <- lm(Filings ~ HispanicPopulation + GDP + Gov, data = state_data)

  regression_summaries[[i]] <- summary(models)
}
```

```r
#consolodate data for Texas
Texas_filings <- as.numeric(filings$Texas)
year <-  as.numeric(filings$State)
Texas_GDP <-  as.numeric(GDP$Texas)
Texas_Gov <-  as.numeric(Gov$Texas)
Texas_denied <- as.numeric(denied$Texas)
Texas_approve <- as.numeric(approve$Texas)
Texas_hispop <- as.numeric(gsub(",", "", hispop$Texas))

#data frame
Texas_data <- data.frame(Year = year, Filings = Texas_filings, HispanicPopulation = Texas_hispop, GDP =

#long data
long_data_Texas <- gather(Texas_data, key = "variable", value = "value", -Filings, -Year, -app, -den)

#Florida
Florida_filings <- as.numeric(filings$Florida)
```

```
## Warning: NAs introduced by coercion
```

```r
year <- as.numeric(filings$State)
Florida_GDP <- as.numeric(GDP$Florida)
Florida_Gov <- as.numeric(Gov$Florida)
Florida_denied <- as.numeric(denied$Florida)
Florida_approve <- as.numeric(approve$Florida)

Florida_hispop <- as.numeric(gsub(",", "", hispop$Florida))

#data frame
Florida_data <- data.frame(Year = year, Filings = Florida_filings, HispanicPopulation = Florida_hispop,

#long data
long_data_Florida <- gather(Florida_data, key = "variable", value = "value", -Filings, -Year, -app, -de

#California
California_filings <- as.numeric(filings$California)
year <-  as.numeric(filings$State)
California_GDP <-  as.numeric(GDP$California)
California_Gov <-  as.numeric(Gov$California)
California_denied <- as.numeric(denied$California)
California_approve <- as.numeric(approve$California)
```

```r
California_hispop <- as.numeric(gsub(",", "", hispop$California))

#data frame
California_data <- data.frame(Year = year, Filings = California_filings, HispanicPopulation = Californi

#long data
long_data_California <- gather(California_data, key = "variable", value = "value", -Filings, -Year, -ap


#Florida
Florida_filings <- as.numeric(filings$Florida)
```

```
## Warning: NAs introduced by coercion
```

```r
year <- as.numeric(filings$State)
Florida_GDP <- as.numeric(GDP$Florida)
Florida_Gov <- as.numeric(Gov$Florida)
Florida_denied <- as.numeric(denied$Florida)
Florida_approve <- as.numeric(approve$Florida)

Florida_hispop <- as.numeric(gsub(",", "", hispop$Florida))

#data frame
Florida_data <- data.frame(Year = year, Filings = Florida_filings, HispanicPopulation = Florida_hispop,

#long data
long_data_Florida <- gather(Florida_data, key = "variable", value = "value", -Filings, -Year, -app, -de

#California
Louisiana_filings <- as.numeric(filings$Louisiana)
year <-  as.numeric(filings$State)
Louisiana_GDP <-  as.numeric(GDP$Louisiana)
Louisiana_Gov <-  as.numeric(Gov$Louisiana)
Louisiana_denied <- as.numeric(denied$Louisiana)
Louisiana_approve <- as.numeric(approve$Louisiana)
Louisiana_hispop <- as.numeric(gsub(",", "", hispop$Louisiana))

#data frame
Louisiana_data <- data.frame(Year = year, Filings = Louisiana_filings, HispanicPopulation = Louisiana_h

#long data
long_data_Louisiana <- gather(Louisiana_data, key = "variable", value = "value", -Filings, -Year, -app,
```

III. Result section

Given the extensive dataset at hand, I decided to perform regression analyses for four specific states: California, Florida, Texas, and Louisiana. The rationale for selecting these states primarily relates to their graphical representation, as they visually exhibit a possible connection between the variables.

Analyzing the regression results for Texas, the coefficient for the Hispanic population is -0.0000176. This implies a slight decrease in the number of asylum cases for each incremental increase in the Hispanic population, but this result is not statistically significant (p-value = 0.368). Similarly, the GDP coefficient is 0.0052397, indicating a minor increase in asylum cases for every unit rise in GDP per capita, but this, too, lacks statistical significance (p-value = 0.155). The absence of statistical significance means we cannot confidently rule out the possibility that these relationships occurred by random chance alone. Therefore, inferring causality from these coefficients would be premature. Further investigation should consider additional variables and the potential for omitted variable bias.

Moving to the regression analysis for Florida, the coefficient for the Hispanic population reveals -0.0004769, signifying a slight reduction in cases for each unit increase in the Hispanic population. Importantly, this result is statistically significant with a p-value of 0.0018210, indicating a robust relationship within the data. The GDP coefficient is 0.0647874, suggesting a positive correlation with the number of cases, and it also achieves statistical significance (p-value = 0.0019682). Nonetheless, despite their statistical significance, these coefficients should not be prematurely interpreted as causal without further investigation to account for potential confounding variables.

In the case of Louisiana's regression findings, the coefficient for the Hispanic population stands at 0.0002495, indicating a slight increase in the number of cases for each unit rise in the Hispanic population, with statistical significance (p-value = 0.0139476). Conversely, the GDP coefficient is -0.0011870, suggesting a slight decrease in cases with an increase in GDP per capita, though this result does not attain statistical significance (p-value = 0.1534442). It's worth noting that the coefficient for the governor variable, at 2.7548629, lacks associated p-values or contextual information, making it challenging to interpret its significance or infer causality. While the statistical significance of the Hispanic population coefficient implies a potential relationship, further analysis is warranted to establish causality conclusively.

Lastly, in the context of the California regression, the coefficient for the Hispanic population is -0.0000512, pointing to an extremely small reduction in cases with each unit increase in the Hispanic population, but this result is not statistically significant (p-value = 0.2829558). The GDP coefficient, at 0.0088341, suggests a minor positive association with the number of cases; however, this result also fails to achieve statistical significance (p-value = 0.2519628). The coefficient for the governor variable is -35.3679313, yet its lack of statistical significance (p-value = 0.1139449) prevents us from confidently interpreting it as indicative of a causal relationship. In light of these results, it appears that within the California dataset, these variables do not exert a substantial or statistically significant influence on the number of asylum cases.

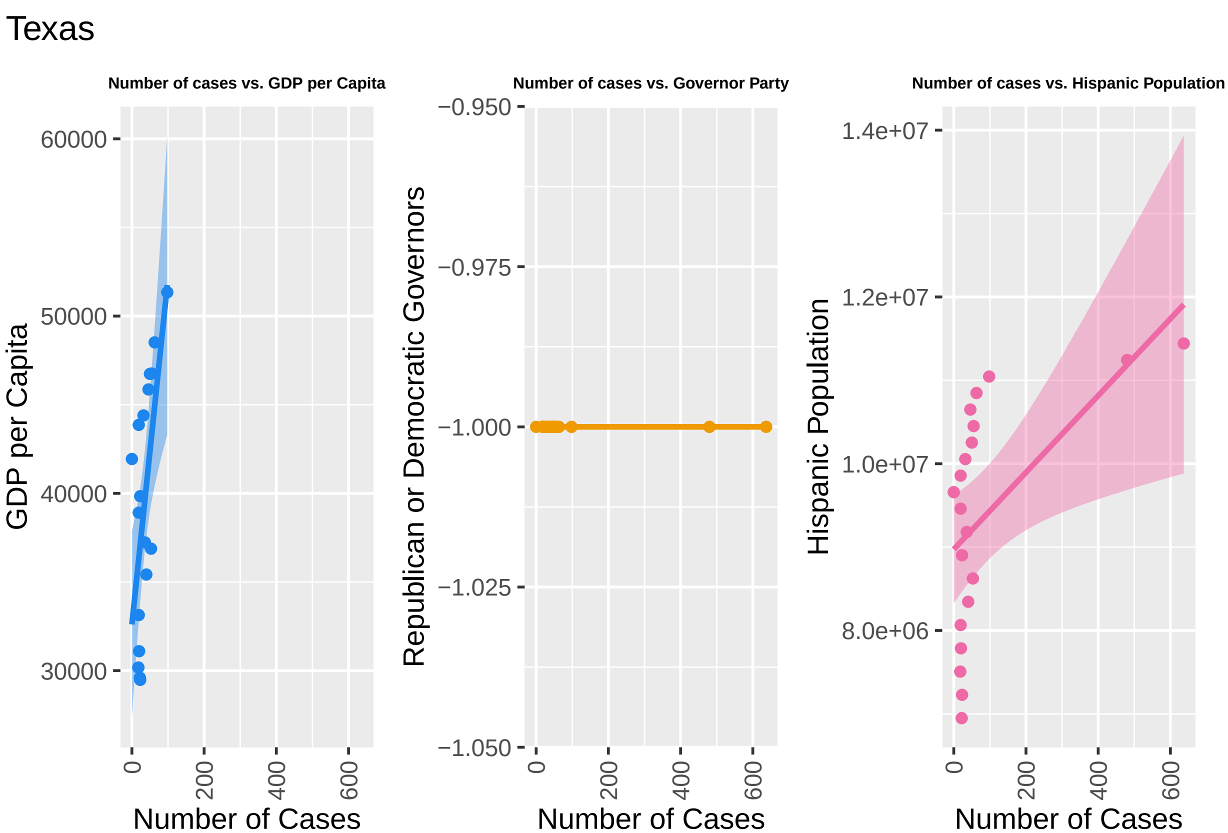
In summary, while the regression analyses provide insights into potential associations, it is crucial to exercise caution in inferring causality, especially in cases where statistical significance is lacking. Further exploration and consideration of additional variables are essential to gain a more comprehensive understanding of these relationships.

(I included a regression analysis for all states in my study, but I only discussed the results for those states for which I created graphs)

```
# install.packages("patchwork")




text_size = 6

#Texas
###############################################################################################################
plot1 <- ggplot(subset(long_data_Texas, variable == "GDP"), aes(x = Filings, y = value)) +
  geom_point(color = "dodgerblue2") +
  geom_smooth(method = "lm", se = TRUE, color = "dodgerblue2", fill = "dodgerblue2") +
  labs(title = "Number of cases vs. GDP per Capita",
       x = "Number of Cases",
       y = "GDP per Capita",
       color = "Legend") +
```

```r
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")


plot2 <- ggplot(subset(long_data_Texas, variable == "Gov"), aes(x = Filings, y = value)) +
  geom_point(color = "orange2") +
  geom_smooth(method = "lm", se = TRUE, color = "orange2", fill = "orange2") +
 labs(title = "Number of cases vs. Governor Party",
         x = "Number of Cases",
         y = "Republican or Democratic Governors",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")



plot3 <- ggplot(subset(long_data_Texas, variable == "HispanicPopulation"), aes(x = Filings, y = value))
  geom_point(color = "hotpink2") +
  geom_smooth(method = "lm", se = TRUE, color = "hotpink2", fill = "hotpink2") +
 labs(title = "Number of cases vs. Hispanic Population",
         x = "Number of Cases",
         y = "Hispanic Population",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")

#plots
combined_plot <- plot1 | plot2 | plot3

# Add an overarching title
combined_plot_with_title <- combined_plot +
    plot_annotation(title = "Texas")

combined_plot_with_title
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 2 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
```



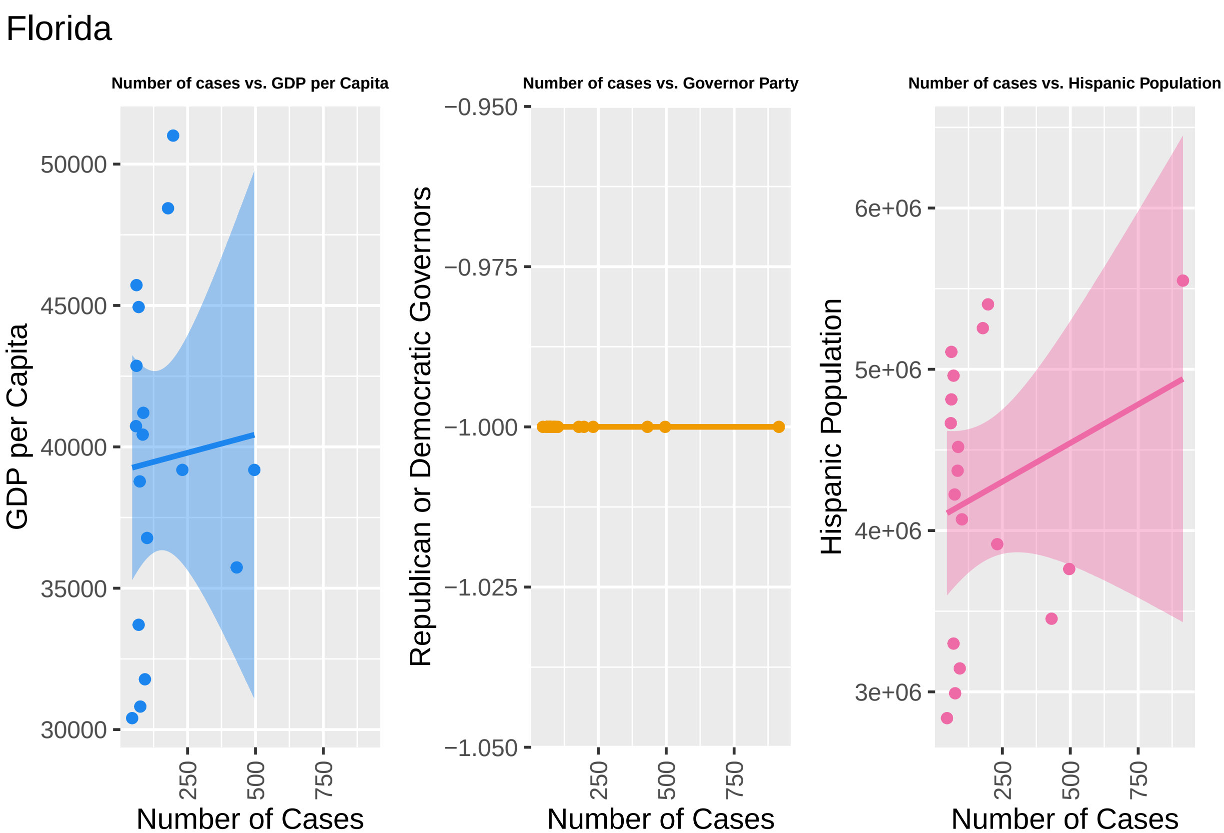

```r
ggsave("my_combined_plot_Texas.png", combined_plot_with_title, width = 12, height = 4)
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).
## Removed 2 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
```

```r
#Florida
##########################################################################################


plot1 <- ggplot(subset(long_data_Florida, variable == "GDP"), aes(x = Filings, y = value)) +
  geom_point(color = "dodgerblue2") +
  geom_smooth(method = "lm", se = TRUE, color = "dodgerblue2", fill = "dodgerblue2") +
  labs(title = "Number of cases vs. GDP per Capita",
       x = "Number of Cases",
       y = "GDP per Capita",
       color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")
```

```r
plot2 <- ggplot(subset(long_data_Florida, variable == "Gov"), aes(x = Filings, y = value)) +
  geom_point(color = "orange2") +
  geom_smooth(method = "lm", se = TRUE, color = "orange2", fill = "orange2") +
 labs(title = "Number of cases vs. Governor Party",
         x = "Number of Cases",
         y = "Republican or Democratic Governors",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")



plot3 <- ggplot(subset(long_data_Florida, variable == "HispanicPopulation"), aes(x = Filings, y = value
  geom_point(color = "hotpink2") +
  geom_smooth(method = "lm", se = TRUE, color = "hotpink2", fill = "hotpink2") +
 labs(title = "Number of cases vs. Hispanic Population",
         x = "Number of Cases",
         y = "Hispanic Population",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")


combined_plot <- plot1 | plot2 | plot3

# Add an overarching title
combined_plot_with_title <- combined_plot +
    plot_annotation(title = "Florida")

combined_plot_with_title
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 3 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 3 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 2 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).
## Removed 2 rows containing missing values (`geom_point()`).
```



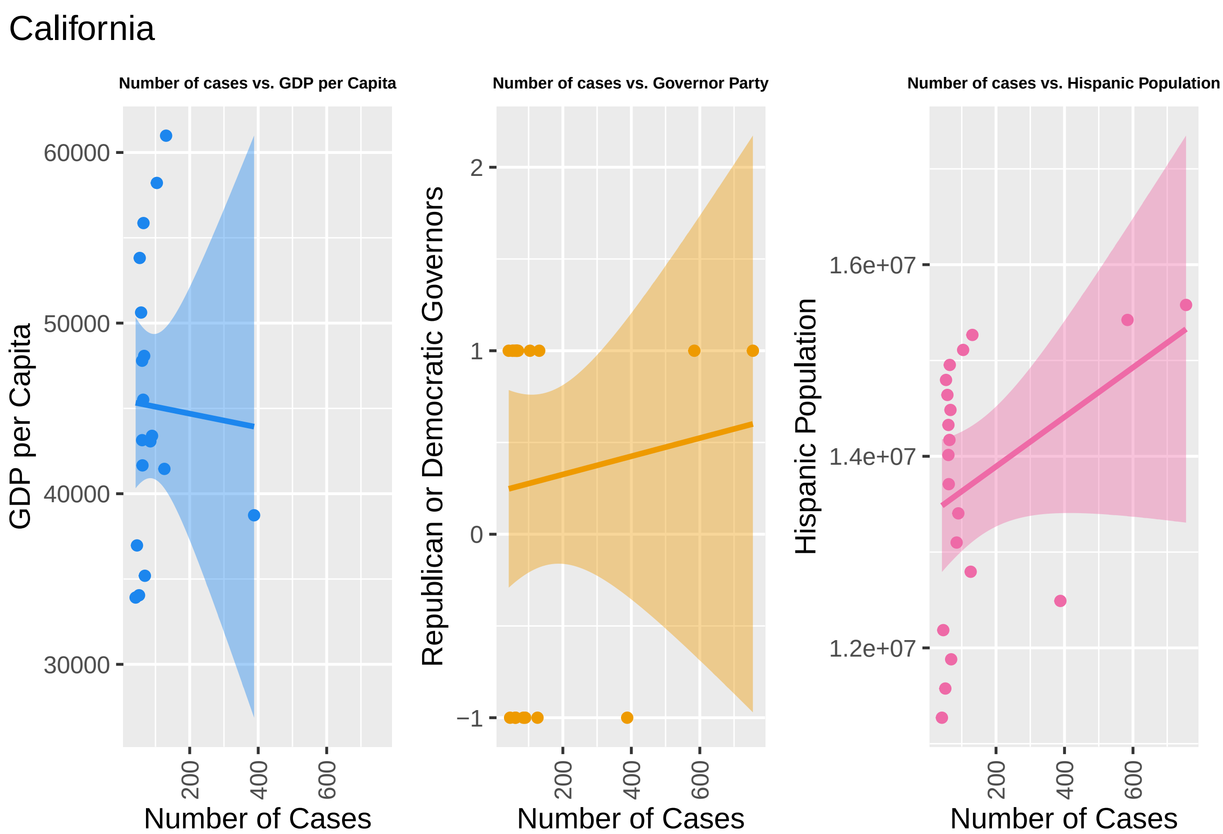

```r
ggsave("my_combined_plot_Florida.png", combined_plot_with_title, width = 12, height = 4)
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 3 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 3 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 2 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).
## Removed 2 rows containing missing values (`geom_point()`).
```

```r
#California
##########################################################################################

plot1 <- ggplot(subset(long_data_California, variable == "GDP"), aes(x = Filings, y = value)) +
```

```r
  geom_point(color = "dodgerblue2") +
  geom_smooth(method = "lm", se = TRUE, color = "dodgerblue2", fill = "dodgerblue2") +
  labs(title = "Number of cases vs. GDP per Capita",
         x = "Number of Cases",
         y = "GDP per Capita",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")


plot2 <- ggplot(subset(long_data_California, variable == "Gov"), aes(x = Filings, y = value)) +
  geom_point(color = "orange2") +
  geom_smooth(method = "lm", se = TRUE, color = "orange2", fill = "orange2") +
 labs(title = "Number of cases vs. Governor Party",
         x = "Number of Cases",
         y = "Republican or Democratic Governors",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")



plot3 <- ggplot(subset(long_data_California, variable == "HispanicPopulation"), aes(x = Filings, y = val
  geom_point(color = "hotpink2") +
  geom_smooth(method = "lm", se = TRUE, color = "hotpink2", fill = "hotpink2") +
 labs(title = "Number of cases vs. Hispanic Population",
         x = "Number of Cases",
         y = "Hispanic Population",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")


combined_plot <- plot1 | plot2 | plot3

# Add an overarching title
combined_plot_with_title <- combined_plot +
    plot_annotation(title = "California")

combined_plot_with_title
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).
## Removed 2 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
```




```
ggsave("my_combined_plot_California.png", combined_plot_with_title, width = 12, height = 4)
```

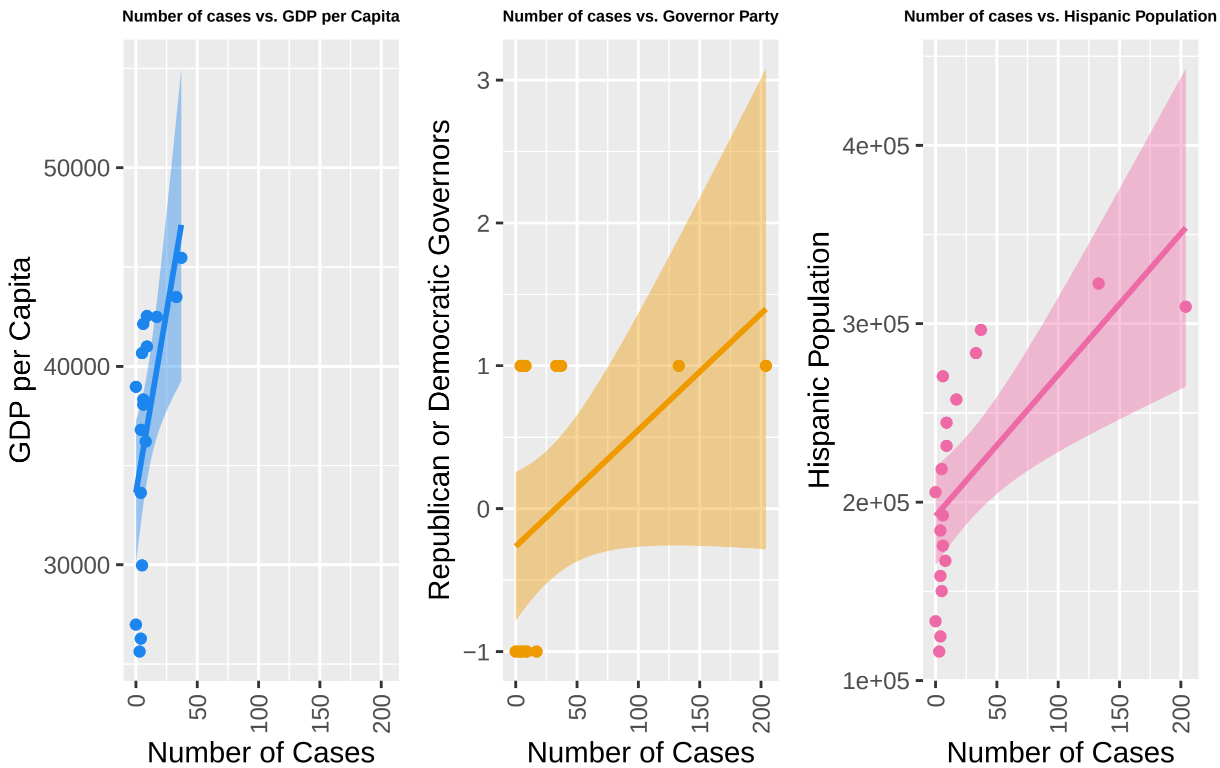
```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 2 rows containing non-finite values (`stat_smooth()`).
## Removed 2 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'
## `geom_smooth()` using formula = 'y ~ x'
```

```
#Louisiana
##########################################################################################

plot1 <- ggplot(subset(long_data_Louisiana, variable == "GDP"), aes(x = Filings, y = value)) +
  geom_point(color = "dodgerblue2") +
  geom_smooth(method = "lm", se = TRUE, color = "dodgerblue2", fill = "dodgerblue2") +
  labs(title = "Number of cases vs. GDP per Capita",
       x = "Number of Cases",
       y = "GDP per Capita",
       color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")
```

```r
plot2 <- ggplot(subset(long_data_Louisiana, variable == "Gov"), aes(x = Filings, y = value)) +
  geom_point(color = "orange2") +
  geom_smooth(method = "lm", se = TRUE, color = "orange2", fill = "orange2") +
 labs(title = "Number of cases vs. Governor Party",
         x = "Number of Cases",
         y = "Republican or Democratic Governors",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")



plot3 <- ggplot(subset(long_data_Louisiana, variable == "HispanicPopulation"), aes(x = Filings, y = valu
  geom_point(color = "hotpink2") +
  geom_smooth(method = "lm", se = TRUE, color = "hotpink2", fill = "hotpink2") +
 labs(title = "Number of cases vs. Hispanic Population",
         x = "Number of Cases",
         y = "Hispanic Population",
         color = "Legend") +
    theme(axis.text.x = element_text(angle = 90, vjust = 0.5, hjust=1),
          plot.title = element_text(hjust = 0.5, size = text_size, face = "bold"),
          legend.position = "bottom")


combined_plot <- plot1 | plot2 | plot3

# Add an overarching title
combined_plot_with_title <- combined_plot +
    plot_annotation(title = "Louisiana")

combined_plot_with_title
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 3 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 3 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 1 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 1 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 1 rows containing non-finite values (`stat_smooth()`).
## Removed 1 rows containing missing values (`geom_point()`).
```

Louisiana




```r
ggsave("my_combined_plot_Louisiana.png", combined_plot_with_title, width = 12, height = 4)
```

```
## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 3 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 3 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 1 rows containing non-finite values (`stat_smooth()`).

## Warning: Removed 1 rows containing missing values (`geom_point()`).

## `geom_smooth()` using formula = 'y ~ x'

## Warning: Removed 1 rows containing non-finite values (`stat_smooth()`).
## Removed 1 rows containing missing values (`geom_point()`).
```

```r
#Pull data from Multiple Regression done before for Texas


kable((regression_summaries[["Texas"]]$coefficients))
```

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-10.3807383	45.602191	-0.2276368	0.8230023
HispanicPopulation	-0.0000176	0.000019	-0.9266029	0.3688023
GDP	0.0052397	0.003502	1.4961870	0.1553474

```
# kable((regression_summaries[["Texas"]]$r.quared))
```

```
#Pull data from Multiple Regression done before for California

kable((regression_summaries[["California"]]$coefficients))
```

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	393.2756930	327.9534073	1.199182	0.2503607
HispanicPopulation	-0.0000512	0.0000458	-1.116618	0.2829558
GDP	0.0088341	0.0073930	1.194936	0.2519628
Gov	-35.3679313	20.9774931	-1.685994	0.1139449

```
#Pull data from Multiple Regression done before for Florida

kable((regression_summaries[["Florida"]]$coefficients))
```

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-431.7370604	213.9653455	-2.017790	0.0632018
HispanicPopulation	-0.0004769	0.0001244	-3.834901	0.0018210
GDP	0.0647874	0.0170695	3.795515	0.0019682

```
#Pull data from Multiple Regression done before for Louisiana
kable((regression_summaries[["Louisiana"]]$coefficients))
```

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.5042779	13.9949293	0.2503963	0.8061946
HispanicPopulation	0.0002495	0.0000879	2.8390126	0.0139476
GDP	-0.0011870	0.0007830	-1.5160332	0.1534442
Gov	2.7548629	1.7091280	1.6118529	0.1309956

```
#Print Summary for all of the States' Multiple Regressions
for (State in names(regression_summaries)) {
  cat('\n\n')
  cat("State: ", State, "\n\n")
  coefficients_table <- regression_summaries[[State]]$coefficients
  print(kable(as.data.frame(coefficients_table), format = "simple", caption = "Coefficients"))
  summary_stats <- regression_summaries[[State]]
  additional_stats_df <- data.frame(
    Statistic = c("R-squared", "Adjusted R-squared", "F-statistic", "Degrees of Freedom"),
    Value = c(summary_stats$r.squared, summary_stats$adj.r.squared, summary_stats$fstatistic[1],summary_
  print(kable(additional_stats_df, format = "simple", caption = "Additional Statistics"))
  cat('\n\n')
}
```

State: California

Table 6: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	393.2756930	327.9534073	1.199182	0.2503607
HispanicPopulation	-0.0000512	0.0000458	-1.116618	0.2829558
GDP	0.0088341	0.0073930	1.194936	0.2519628
Gov	-35.3679313	20.9774931	-1.685994	0.1139449

Table 7: Additional Statistics

Statistic	Value
R-squared	0.1960809
Adjusted R-squared	0.0238125
F-statistic	1.1382292
Degrees of Freedom	14.0000000

State: New.York

Table 8: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	48.3932838	27.8449334	1.737956	0.1041538
HispanicPopulation	-0.0000560	0.0000151	-3.722322	0.0022746
GDP	0.0030948	0.0005057	6.119312	0.0000265
Gov	-5.3345866	1.1899355	-4.483089	0.0005156

Table 9: Additional Statistics

Statistic	Value
R-squared	0.9011083
Adjusted R-squared	0.8799173
F-statistic	42.5230246
Degrees of Freedom	14.0000000

State: Florida

Table 10: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-431.7370604	213.9653455	-2.017790	0.0632018
HispanicPopulation	-0.0004769	0.0001244	-3.834901	0.0018210
GDP	0.0647874	0.0170695	3.795515	0.0019682

Table 11: Additional Statistics

Statistic	Value
R-squared	0.5139013
Adjusted R-squared	0.4444587
F-statistic	7.4003691
Degrees of Freedom	14.0000000

State: Texas

Table 12: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-10.3807383	45.602191	-0.2276368	0.8230023
HispanicPopulation	-0.0000176	0.000019	-0.9266029	0.3688023
GDP	0.0052397	0.003502	1.4961870	0.1553474

Table 13: Additional Statistics

Statistic	Value
R-squared	0.4325276
Adjusted R-squared	0.3568646
F-statistic	5.7165017
Degrees of Freedom	15.0000000

State: New.Jersey

Table 14: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-26.5154426	7.5224216	-3.524855	0.0033649
HispanicPopulation	-0.0000701	0.0000266	-2.635624	0.0195706
GDP	0.0027893	0.0008301	3.360347	0.0046669
Gov	-1.2737925	1.1042893	-1.153495	0.2680205

Table 15: Additional Statistics

Statistic	Value
R-squared	0.7087799
Adjusted R-squared	0.6463756
F-statistic	11.3578702
Degrees of Freedom	14.0000000

State: Massachusetts

Table 16: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-0.7948492	2.6736326	-0.2972919	0.7748723
HispanicPopulation	0.0000066	0.0000209	0.3149888	0.7619521
GDP	-0.0000246	0.0002813	-0.0874663	0.9327504
Gov	-0.0927822	0.3349068	-0.2770388	0.7897528

Table 17: Additional Statistics

Statistic	Value
R-squared	0.2901312
Adjusted R-squared	-0.0140983
F-statistic	0.9536591
Degrees of Freedom	7.0000000

State: Virginia

Table 18: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-97.6929235	51.3903043	-1.900999	0.0797008
HispanicPopulation	-0.0001777	0.0001143	-1.554774	0.1440001
GDP	0.0047011	0.0026368	1.782868	0.0979610
Gov	2.9040843	3.1717724	0.915603	0.3765468

Table 19: Additional Statistics

Statistic	Value
R-squared	0.3066688
Adjusted R-squared	0.1466693
F-statistic	1.9166862
Degrees of Freedom	13.0000000

State: Illinois

Table 20: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	86.9924073	71.6061758	1.2148730	0.3113107
HispanicPopulation	-0.0002948	0.0000975	-3.0251588	0.0565274
GDP	0.0113549	0.0033436	3.3960320	0.0425854
Gov	-3.0339252	5.0915699	-0.5958722	0.5932237

Table 21: Additional Statistics

Statistic	Value
R-squared	0.9142808
Adjusted R-squared	0.8285616
F-statistic	10.6659981
Degrees of Freedom	3.0000000

State: Maryland

Table 22: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	19.0179516	25.6363188	0.7418363	0.4724568
HispanicPopulation	0.0000806	0.0000493	1.6335125	0.1283054
GDP	-0.0009977	0.0009764	-1.0218030	0.3270327
Gov	-3.4876367	1.0917914	-3.1944166	0.0077120

Table 23: Additional Statistics

Statistic	Value
R-squared	0.7080779
Adjusted R-squared	0.6350974
F-statistic	9.7022874
Degrees of Freedom	12.0000000

State: Washington

Table 24: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-7.8080302	7.3848263	-1.0573072	0.3082750
HispanicPopulation	-0.0000249	0.0000312	-0.7979923	0.4382019
GDP	0.0006899	0.0006341	1.0880150	0.2949649

Table 25: Additional Statistics

Statistic	Value
R-squared	0.1695707
Adjusted R-squared	0.0509379
F-statistic	1.4293747
Degrees of Freedom	14.0000000

State: Georgia

Table 26: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-39.1907528	8.9120680	-4.397493	0.0013403
HispanicPopulation	-0.0000500	0.0000176	-2.843682	0.0174380
GDP	0.0022922	0.0005324	4.305670	0.0015476
Gov	-2.1065024	1.9092752	-1.103300	0.2957393

Table 27: Additional Statistics

Statistic	Value
R-squared	0.7493247
Adjusted R-squared	0.6741221
F-statistic	9.9640792
Degrees of Freedom	10.0000000

State: Pennsylvania

Table 28: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-17.3118402	5.5778883	-3.1036549	0.0100385
HispanicPopulation	-0.0000446	0.0000151	-2.9489035	0.0132353
GDP	0.0011982	0.0003805	3.1495082	0.0092503
Gov	0.1215296	0.2718340	0.4470728	0.6634973

Table 29: Additional Statistics

Statistic	Value
R-squared	0.5898908
Adjusted R-squared	0.4780428
F-statistic	5.2740414
Degrees of Freedom	11.0000000

State: Tennessee

Table 30: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-29.8131355	41.6703386	-0.7154522	0.4974932
HispanicPopulation	-0.0000701	0.0001386	-0.5058329	0.6285104
GDP	0.0015056	0.0022403	0.6720555	0.5231032
Gov	0.9769318	1.6321276	0.5985634	0.5683190

Table 31: Additional Statistics

Statistic	Value
R-squared	0.2235622
Adjusted R-squared	-0.1091968
F-statistic	0.6718442
Degrees of Freedom	7.0000000

State: Louisiana

Table 32: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.5042779	13.9949293	0.2503963	0.8061946
HispanicPopulation	0.0002495	0.0000879	2.8390126	0.0139476
GDP	-0.0011870	0.0007830	-1.5160332	0.1534442
Gov	2.7548629	1.7091280	1.6118529	0.1309956

Table 33: Additional Statistics

Statistic	Value
R-squared	0.6600312
Adjusted R-squared	0.5815768
F-statistic	8.4129334
Degrees of Freedom	13.0000000

State: Arizona

Table 34: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.6337515	9.5940472	0.3787506	0.7105549
HispanicPopulation	0.0000105	0.0000150	0.7035226	0.4932653
GDP	-0.0003948	0.0006974	-0.5660265	0.5803360
Gov	2.0377704	1.4286351	1.4263757	0.1756783

Table 35: Additional Statistics

Statistic	Value
R-squared	0.1287914
Adjusted R-squared	-0.0578961
F-statistic	0.6898769
Degrees of Freedom	14.0000000

State: Ohio

Table 36: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-23.7165511	16.7408402	-1.4166882	0.1902441
HispanicPopulation	-0.0000473	0.0000936	-0.5057972	0.6251544
GDP	0.0011503	0.0013060	0.8807326	0.4013695
Gov	0.1517198	0.8282287	0.1831859	0.8587125

Table 37: Additional Statistics

Statistic	Value
R-squared	0.5873542
Adjusted R-squared	0.4498056
F-statistic	4.2701579
Degrees of Freedom	9.0000000

State: Nebraska

Table 38: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	6.3805950	6.9497561	0.9181034	0.3766492
HispanicPopulation	0.0000734	0.0001045	0.7024741	0.4957850
GDP	-0.0003641	0.0005536	-0.6577139	0.5231387

Table 39: Additional Statistics

Statistic	Value
R-squared	0.0421983
Adjusted R-squared	-0.1174353
F-statistic	0.2643446
Degrees of Freedom	12.0000000

State: Colorado

Table 40: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-15.6616540	16.8456428	-0.9297154	0.3724718
HispanicPopulation	-0.0000190	0.0000367	-0.5183650	0.6144706
GDP	0.0008769	0.0005530	1.5857486	0.1411034
Gov	-0.2944931	2.2750769	-0.1294432	0.8993436

Table 41: Additional Statistics

Statistic	Value
R-squared	0.5223421
Adjusted R-squared	0.3920717
F-statistic	4.0096775
Degrees of Freedom	11.0000000

State: North.Carolina

Table 42: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-16.6140511	9.2132338	-1.8032812	0.1090049
HispanicPopulation	-0.0000056	0.0000146	-0.3844731	0.7106464
GDP	0.0006287	0.0005131	1.2253333	0.2552982
Gov	0.0946935	0.7361567	0.1286323	0.9008237

Table 43: Additional Statistics

Statistic	Value
R-squared	0.5344758
Adjusted R-squared	0.3599043
F-statistic	3.0616430
Degrees of Freedom	8.0000000

State: Minnesota

Table 44: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.5282590	11.4831314	0.2201716	0.8312521
HispanicPopulation	0.0000079	0.0000655	0.1198993	0.9075193
GDP	-0.0000144	0.0005309	-0.0270921	0.9790499
Gov	1.8507034	1.3352680	1.3860165	0.2031494

Table 45: Additional Statistics

Statistic	Value
R-squared	0.6460029
Adjusted R-squared	0.5132539
F-statistic	4.8663509
Degrees of Freedom	8.0000000

State: Nevada

Table 46: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-10.5307418	5.826717	-1.807320	0.0908075
HispanicPopulation	-0.0000143	0.000009	-1.583370	0.1341896
GDP	0.0006057	0.000262	2.311708	0.0354132

Table 47: Additional Statistics

Statistic	Value
R-squared	0.2900782
Adjusted R-squared	0.1954220
F-statistic	3.0645441
Degrees of Freedom	15.0000000

State: Missouri

Table 48: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-18.5844986	20.6988229	-0.8978529	0.3926494
HispanicPopulation	-0.0001255	0.0001762	-0.7118959	0.4945678
GDP	0.0012646	0.0015360	0.8232721	0.4316265
Gov	0.2755930	0.7171580	0.3842849	0.7096894

Table 49: Additional Statistics

Statistic	Value
R-squared	0.2966602
Adjusted R-squared	0.0622136
F-statistic	1.2653638
Degrees of Freedom	9.0000000

State: Connecticut

Table 50: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-2.4355310	4.8795416	-0.4991311	0.6284841
HispanicPopulation	0.0000032	0.0000430	0.0746399	0.9419732
GDP	0.0000535	0.0003354	0.1593884	0.8765361
Gov	0.5444349	1.0492316	0.5188891	0.6151261

Table 51: Additional Statistics

Statistic	Value
R-squared	0.3879306
Adjusted R-squared	0.2043098
F-statistic	2.1126725
Degrees of Freedom	10.0000000

State: Oregon

Table 52: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.0073382	1.4324045	1.401377	0.1986825
HispanicPopulation	0.0000149	0.0000105	1.415452	0.1946650
GDP	-0.0001873	0.0001245	-1.504860	0.1707751

Table 53: Additional Statistics

Statistic	Value
R-squared	0.2212012
Adjusted R-squared	0.0265015
F-statistic	1.1361149
Degrees of Freedom	8.0000000

State: Michigan

Table 54: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-5.9138652	3.2073497	-1.843848	0.1147645
HispanicPopulation	-0.0001095	0.0000460	-2.377920	0.0549238
GDP	0.0014911	0.0005977	2.494474	0.0468775
Gov	0.3224002	0.3023651	1.066261	0.3273191

Table 55: Additional Statistics

Statistic	Value
R-squared	0.5649804
Adjusted R-squared	0.3474706
F-statistic	2.5974940
Degrees of Freedom	6.0000000

State: Utah

Table 56: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	6.0295199	4.7499988	1.2693729	0.2938373
HispanicPopulation	-0.0000035	0.0000310	-0.1124330	0.9175812
GDP	-0.0000742	0.0003196	-0.2322717	0.8312703

Table 57: Additional Statistics

Statistic	Value
R-squared	0.2119902
Adjusted R-squared	-0.3133497
F-statistic	0.4035296
Degrees of Freedom	3.0000000

State: Hawaii

Table 58: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	13.6674683	NaN	NaN	NaN
HispanicPopulation	-0.0000962	NaN	NaN	NaN

Table 59: Additional Statistics

Statistic	Value
R-squared	1
Adjusted R-squared	NaN
F-statistic	NaN
Degrees of Freedom	0

State: New.Mexico

Table 60: Coefficients

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-46.7790756	59.2104330	-0.7900479	0.4871901
HispanicPopulation	0.0000434	0.0000784	0.5530542	0.6187691
GDP	0.0001922	0.0005149	0.3732780	0.7337576
Gov	0.7906499	0.6864894	1.1517293	0.3328899

Table 61: Additional Statistics

Statistic	Value
R-squared	0.659503
Adjusted R-squared	0.319006

Statistic	Value
F-statistic	1.936883
Degrees of Freedom	3.000000

IV. Conclusion

The primary aim of this project was to examine the patterns in Nicaraguan asylum requests and determinations in the United States, with a specific focus on the potential influence of various state-level factors. My hypothesis suggested that the political affiliation of a state's governor, the proportion of its Hispanic population, and the state's GDP per capita would have a notable impact on these patterns, particularly after 2018.My regression analyses, which I conducted for selected states (California, Florida, Texas, and Louisiana), revealed a multifaceted and intricate scenario. For instance, in Florida, I identified a statistically significant correlation between the number of asylum cases and both the Hispanic population and GDP. However, in other states like Texas and California, the findings did not reach statistical significance, emphasizing the variation among different regions.

It is important to acknowledge the limitations inherent in this analysis. One major constraint is the reliance on historical data up to 2020, which does not account for recent political or economic developments that could influence asylum patterns. Additionally, the potential presence of confounding factors like legal representation access, or US immigration policies– which were not considered in the study but capable of affecting the results – should not be disregarded. Another limitation relates to my assumption of linear growth in the Hispanic population between census years. This assumption may not accurately mirror real-world demographic shifts, potentially introducing bias into the analysis. Furthermore, the choice to concentrate on asylum applications rather than approved or denied outcomes was based on data availability and reliability but may not fully capture the subtleties of immigration trends.

If additional time and resources were at my disposal, several enhancements could be implemented. Expanding the dataset to encompass more recent years would furnish a more up-to-date understanding of the patterns. Integrating supplementary variables, such as state-specific immigration policies or international political events, could offer a more holistic perspective. Qualitative research, including interviews with Nicaraguan migrants, could yield deeper insights into individual decision-making processes.

Ultimately, employing advanced statistical methods or machine learning techniques could potentially unveil more intricate relationships between the variables and asylum patterns. Collaborating with experts in immigration law, political science, and sociology could further enrich the analysis, providing a multidisciplinary view of this significant issue.

In conclusion, while this study does shed light on certain aspects of Nicaraguan asylum patterns in the United States, it also underscores the complexity of immigration trends and the ongoing necessity for research in this domain.