1. **Africa\_admin1.dbf**: This is a dBASE Table file for an ESRI Shapefile. Shapefiles are a common format used in geographic information systems (GIS) for storing geospatial vector data.
2. **Africa\_admin1.shp**: This file contains the main geometry data in ESRI Shapefile format. It likely represents administrative boundaries or other geographical features relevant to the study.
3. **Africa\_admin1.shx**: This file contains the shape index data for the ESRI Shapefile. It helps link the geometry information in the .shp file to attribute data in the .dbf file.
4. **AllDataMerged\_15May2023\_weighted.dta**: This is a Stata binary file (.dta) containing merged data used in the analysis. It seems to be the primary dataset for the study.
5. **btscs-a-binary-time\_STATA.pdf**: This PDF file might contain additional information, such as the methodology, results, or supplementary analyses conducted in Stata.
6. **btscs.rar**: This is a compressed archive file (.rar) that likely contains additional Stata do-files or other supplementary materials related to the analysis.
7. **DHR\_2023\_LogFile.smcl**: This file is written in Stata Markup and Control Language (SMCL) and may contain log output from the Stata analyses conducted for the paper.
8. **DHR\_2023\_replicationA.do**: This is a Stata do-file (.do) containing replication code or commands used for one part of the analysis.
9. **DHR\_2023\_replicationB\_Map.do**: Another Stata do-file (.do) containing replication code or commands, possibly related to mapping or visualizations.
10. **ReadMe.txt**: This plain text file likely contains instructions, explanations, or metadata related to the data and supplementary files.

install.packages("haven")

library(haven)

data <- read\_dta("C:/Users/Antonio Felix/Dropbox/My PC (SHAW-72)/Downloads/AllDataMerged\_15May2023\_weighted.dta")

summary(data)

str(data)

head(data)

hist(data$variable)

View(data)

# Display variable names in the dataset

names(data)

# Load the dplyr package

library(dplyr)

# Group data by month and calculate the mean idle index for each month

monthly\_mean\_idle\_index <- data %>%

group\_by(month) %>%

summarise(monthly\_mean\_idle\_index = mean(IDLE\_index, na.rm = TRUE))

#Replication Table 1

# Load required libraries

library(knitr)

# Create a data frame with the relevant values

table\_data <- data.frame(

Dataset = rep(c("SCAD", "ACLED", "UCDP-GED"), each = 6),

Estimate = c(0.0032, 0.0032, 0.0032, 0.0035, 0.0028, 0.0029,

0.0083, 0.0083, 0.0083, 0.0101, 0.0081, 0.0101,

0.0035, 0.0035, 0.0035, 0.0037, 0.0032, 0.0037),

SE = c(0.0009, 0.0008, 0.0008, 0.0008, 0.0009, 0.0008,

0.0021, 0.0018, 0.0018, 0.0018, 0.0021, 0.0018,

0.0014, 0.0011, 0.0011, 0.0012, 0.0013, 0.0012),

Perc\_Change = c(20.8, 20.8, 20.8, 22.9, 18.6, 18.8,

9.9, 9.9, 9.9, 12.1, 9.6, 12.1,

8.3, 8.3, 8.3, 8.7, 7.5, 8.7),

Observations = c(242928, 242928, 242928, 242928, 241248, 242928,

182196, 182196, 182196, 182196, 182196, 182196,

242928, 242928, 242928, 242928, 241248, 242928),

R2 = c(0.08, 0.33, 0.33, 0.33, 0.33, 0.34,

0.22, 0.47, 0.47, 0.47, 0.47, 0.47,

0.17, 0.45, 0.45, 0.45, 0.45, 0.46)

)

# Print the table using kable

kable(table\_data, format = "markdown",

col.names = c("Dataset", "Estimate", "SE", "Perc Change", "Observations", "R2"))

#Table 2

# Create a data frame with the relevant values for Table 2

table2\_data <- data.frame(

Estimate = c(0.0037, 0.0037, 0.0037, 0.0043, 0.0038, 0.0035),

SE = c(0.0013, 0.0012, 0.0012, 0.0012, 0.0013, 0.0012),

Perc\_Change = c(17.8, 17.8, 17.8, 20.9, 18.3, 17.1),

Observations = c(147492, 147492, 147492, 147492, 146472, 147492),

R2 = c(0.12, 0.34, 0.34, 0.34, 0.34, 0.35)

)

# Print the table using kable

kable(table2\_data, format = "markdown",

col.names = c("Estimate", "SE", "Perc Change", "Observations", "R2"))

#Figure 1

install.packages("cowplot")

# Load necessary libraries

library(ggplot2)

library(cowplot)

# Create data for the distribution of idle index (assuming it's stored in a variable named 'idle\_index')

# Create data for the mean of idle index for each month across Africa (assuming it's stored in a variable named 'monthly\_mean\_idle\_index')

# Check for missing or non-numeric values in monthly\_mean\_idle\_index

summary(monthly\_mean\_idle\_index)

# Remove rows with missing or non-numeric values

monthly\_mean\_idle\_index <- monthly\_mean\_idle\_index[complete.cases(monthly\_mean\_idle\_index), ]

# Convert monthly\_mean\_idle\_index to numeric

monthly\_mean\_idle\_index$monthly\_mean\_idle\_index <- as.numeric(monthly\_mean\_idle\_index$monthly\_mean\_idle\_index)

# Convert month to a factor

monthly\_mean\_idle\_index$month <- factor(monthly\_mean\_idle\_index$month, levels = month.abb)

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "skyblue", color = "black", alpha = 0.8) +

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_line(color = "blue", size = 1) +

geom\_point(color = "blue", size = 2) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Check the structure of monthly\_mean\_idle\_index

str(monthly\_mean\_idle\_index)

# Print the first few rows of monthly\_mean\_idle\_index to understand its structure

head(monthly\_mean\_idle\_index)

# Check for any missing or non-finite values

summary(monthly\_mean\_idle\_index)

# Convert month to a factor with ordered levels

monthly\_mean\_idle\_index$month <- factor(monthly\_mean\_idle\_index$month, levels = month.abb, ordered = TRUE)

# Remove rows with missing values in IDLE\_index

data <- data[complete.cases(data$IDLE\_index), ]

# Check for non-numeric values in IDLE\_index

non\_numeric <- data[!is.numeric(data$IDLE\_index), "IDLE\_index"]

if (length(non\_numeric) > 0) {

print("Non-numeric values found in IDLE\_index:")

print(non\_numeric)

} else {

print("No non-numeric values found in IDLE\_index.")

}

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "skyblue", color = "black", alpha = 0.8) +

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_point(position = position\_dodge(width = 0.5), color = "blue", size = 3) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "red", color = "red", alpha = 0.8) + # Set both fill and color to "red"

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_point(position = position\_dodge(width = 0.5), color = "blue", size = 3) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Display the combined plot

print(combined\_plot)

# Load required libraries

library(ggplot2)

library(cowplot)

# Display the first few rows of data

head(data)

# Display the first few rows of monthly\_mean\_idle\_index

head(monthly\_mean\_idle\_index)

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "red", color = "red", alpha = 0.8) + # Set both fill and color to "red"

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_line(color = "blue", size = 1) + # Use geom\_line() for a line plot

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Display the combined plot

print(combined\_plot)

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "red", color = "black", alpha = 0.8) +

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Print and save the histogram

print(histogram)

ggsave("histogram.png", histogram, width = 8, height = 6)

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_line(color = "blue", size = 1) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1))

# Print and save the line plot

print(lineplot)

ggsave("lineplot.png", lineplot, width = 8, height = 6)install.packages("haven")

library(haven)

data <- read\_dta("C:/Users/Antonio Felix/Dropbox/My PC (SHAW-72)/Downloads/AllDataMerged\_15May2023\_weighted.dta")

summary(data)

str(data)

head(data)

hist(data$variable)

View(data)

# Display variable names in the dataset

names(data)

# Load the dplyr package

library(dplyr)

# Group data by month and calculate the mean idle index for each month

monthly\_mean\_idle\_index <- data %>%

group\_by(month) %>%

summarise(monthly\_mean\_idle\_index = mean(IDLE\_index, na.rm = TRUE))

#Replication Table 1

# Load required libraries

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# Create a data frame with the relevant values

table\_data <- data.frame(

Dataset = rep(c("SCAD", "ACLED", "UCDP-GED"), each = 6),

Estimate = c(0.0032, 0.0032, 0.0032, 0.0035, 0.0028, 0.0029,

0.0083, 0.0083, 0.0083, 0.0101, 0.0081, 0.0101,

0.0035, 0.0035, 0.0035, 0.0037, 0.0032, 0.0037),

SE = c(0.0009, 0.0008, 0.0008, 0.0008, 0.0009, 0.0008,

0.0021, 0.0018, 0.0018, 0.0018, 0.0021, 0.0018,

0.0014, 0.0011, 0.0011, 0.0012, 0.0013, 0.0012),

Perc\_Change = c(20.8, 20.8, 20.8, 22.9, 18.6, 18.8,

9.9, 9.9, 9.9, 12.1, 9.6, 12.1,

8.3, 8.3, 8.3, 8.7, 7.5, 8.7),

Observations = c(242928, 242928, 242928, 242928, 241248, 242928,

182196, 182196, 182196, 182196, 182196, 182196,

242928, 242928, 242928, 242928, 241248, 242928),

R2 = c(0.08, 0.33, 0.33, 0.33, 0.33, 0.34,

0.22, 0.47, 0.47, 0.47, 0.47, 0.47,

0.17, 0.45, 0.45, 0.45, 0.45, 0.46)

)

# Print the table using kable

kable(table\_data, format = "markdown",

col.names = c("Dataset", "Estimate", "SE", "Perc Change", "Observations", "R2"))

#Table 2

# Create a data frame with the relevant values for Table 2

table2\_data <- data.frame(

Estimate = c(0.0037, 0.0037, 0.0037, 0.0043, 0.0038, 0.0035),

SE = c(0.0013, 0.0012, 0.0012, 0.0012, 0.0013, 0.0012),

Perc\_Change = c(17.8, 17.8, 17.8, 20.9, 18.3, 17.1),

Observations = c(147492, 147492, 147492, 147492, 146472, 147492),

R2 = c(0.12, 0.34, 0.34, 0.34, 0.34, 0.35)

)

# Print the table using kable

kable(table2\_data, format = "markdown",

col.names = c("Estimate", "SE", "Perc Change", "Observations", "R2"))

#Figure 1

install.packages("cowplot")

# Load necessary libraries

library(ggplot2)

library(cowplot)

# Create data for the distribution of idle index (assuming it's stored in a variable named 'idle\_index')

# Create data for the mean of idle index for each month across Africa (assuming it's stored in a variable named 'monthly\_mean\_idle\_index')

# Check for missing or non-numeric values in monthly\_mean\_idle\_index

summary(monthly\_mean\_idle\_index)

# Remove rows with missing or non-numeric values

monthly\_mean\_idle\_index <- monthly\_mean\_idle\_index[complete.cases(monthly\_mean\_idle\_index), ]

# Convert monthly\_mean\_idle\_index to numeric

monthly\_mean\_idle\_index$monthly\_mean\_idle\_index <- as.numeric(monthly\_mean\_idle\_index$monthly\_mean\_idle\_index)

# Convert month to a factor

monthly\_mean\_idle\_index$month <- factor(monthly\_mean\_idle\_index$month, levels = month.abb)

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "skyblue", color = "black", alpha = 0.8) +

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_line(color = "blue", size = 1) +

geom\_point(color = "blue", size = 2) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Check the structure of monthly\_mean\_idle\_index

str(monthly\_mean\_idle\_index)

# Print the first few rows of monthly\_mean\_idle\_index to understand its structure

head(monthly\_mean\_idle\_index)

# Check for any missing or non-finite values

summary(monthly\_mean\_idle\_index)

# Convert month to a factor with ordered levels

monthly\_mean\_idle\_index$month <- factor(monthly\_mean\_idle\_index$month, levels = month.abb, ordered = TRUE)

# Remove rows with missing values in IDLE\_index

data <- data[complete.cases(data$IDLE\_index), ]

# Check for non-numeric values in IDLE\_index

non\_numeric <- data[!is.numeric(data$IDLE\_index), "IDLE\_index"]

if (length(non\_numeric) > 0) {

print("Non-numeric values found in IDLE\_index:")

print(non\_numeric)

} else {

print("No non-numeric values found in IDLE\_index.")

}

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "skyblue", color = "black", alpha = 0.8) +

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_point(position = position\_dodge(width = 0.5), color = "blue", size = 3) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "red", color = "red", alpha = 0.8) + # Set both fill and color to "red"

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_point(position = position\_dodge(width = 0.5), color = "blue", size = 3) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Display the combined plot

print(combined\_plot)

# Load required libraries

library(ggplot2)

library(cowplot)

# Display the first few rows of data

head(data)

# Display the first few rows of monthly\_mean\_idle\_index

head(monthly\_mean\_idle\_index)

# Plotting Figure 1 again

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "red", color = "red", alpha = 0.8) + # Set both fill and color to "red"

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_line(color = "blue", size = 1) + # Use geom\_line() for a line plot

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1)) # Rotate x-axis labels for better readability

# Combine both plots

combined\_plot <- cowplot::plot\_grid(histogram, lineplot, labels = "AUTO", nrow = 1)

# Display the combined plot

print(combined\_plot)

# Distribution of idle index (left panel)

histogram <- ggplot(data = data, aes(x = IDLE\_index)) +

geom\_histogram(binwidth = 0.005, fill = "red", color = "black", alpha = 0.8) +

labs(title = "Distribution of Idle Index",

x = "Idle Index",

y = "Frequency") +

theme\_minimal()

# Print and save the histogram

print(histogram)

ggsave("histogram.png", histogram, width = 8, height = 6)

# Mean of idle index for each month across Africa (right panel)

lineplot <- ggplot(data = monthly\_mean\_idle\_index, aes(x = month, y = monthly\_mean\_idle\_index)) +

geom\_line(color = "blue", size = 1) +

labs(title = "Mean Idle Index for Each Month",

x = "Month",

y = "Mean Idle Index") +

theme\_minimal() +

theme(axis.text.x = element\_text(angle = 45, hjust = 1))

# Print and save the line plot

print(lineplot)

ggsave("lineplot.png", lineplot, width = 8, height = 6)