Untitled

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This document generates the key exploratory data analysis figures for the bachelor's project. The code is organized into chunks for clarity and reproducibility.

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0.0.1. Overview Figures

This section provides a general overview of the data sources and the raw comparison between the original treatment and control groups.

#|label: fig-overview #|fig-cap: "An overview of the data sources and the raw comparison between the original treatment and control groups." #|figwidth: 10 #|fig-height: 5 #| echo: false

1. — Harmonize Y-axis for Figure 1 —

y_min_fig1 <- min(c(plot_A_data avg_milex , $plot_{B_d}ata$ avg_milex), na.rm = TRUE) y_max_fig1 <- max(c(plot_A_data avg_milex , $plot_{B_d}ata$ avg_milex), na.rm = TRUE) y_limits_fig1 <- c(y_min_fig1, y_max_fig1)

2. — Create individual plots for Figure 1 —

plot_A <- ggplot(plot_A_data, aes(x = year, y = avg_milex, color = source, group = source)) + geom_line(linewidth = 1) + geom_point(size = 2.5) + geom_vline(xintercept = 2022, linetype = "dashed", color = "black") + scale_x_continuous(breaks = seq(2014, 2025, by = 2)) + scale_y_continuous(limits = y_limits_fig1) + labs(title = "A: Data Source

Comparison", x = "Year", y = "Avg. Military Spending (% GDP)", color = NULL) + theme_minimal(base_size = 12) + theme(legend.position = "bottom")

plot_B <- ggplot(plot_B_data, aes(x = year, y = avg_milex, color = group_label, group = group_label)) + geom_line(linewidth = 1) + geom_point(size = 2.5) + geom_vline(xintercept = 2022, linetype = "dashed", color = "black") + scale_x_continuous(breaks = seq(2014, 2025, by = 2), limits = c(2014, 2025)) + scale_y_continuous(limits = y_limits_fig1) + labs(title = "B: Treatment vs. Original Control", subtitle = "Note: Uses SIPRI data for comparability.", x = "Year", y = NULL, color = NULL) + theme_minimal(base_size = 12) + theme(legend.position = "bottom")

3. — Combine Figure 1 —

plot_A + plot_B